

A
SIX MONTHS TOUR
THROUGH THE
NORTH of ENGLAND.

CONTAINING,
An Account of the present State of AGRICULTURE,
MANUFACTURES and POPULATION, in several
Counties of this Kingdom.

- PARTICULARLY,
- | | |
|--|---|
| I. The Nature, Value, and Rental of the Soil. | VI. The Condition and Number of the Poor, with their Rates, Earnings, &c. |
| II. The Size of Farms, with Accounts of their Stock, Products, Population, and various Methods of Culture. | VII. The Prices of Labour and Provisions, and the Proportion between them. |
| III. The Use, Expence, and Profit of several Sorts of Manure. | VIII. The Register of many curious and useful Experiments in Agriculture, and general Practices in rural Oeconomics, communicated by several of the Nobility, Gentry, &c. &c. |
| IV. The Breed of Cattle, and the respective Profits attending them. | |
| V. The State of the Waste Lands which might and ought to be cultivated. | |

INTERSPERSED

With Descriptions of the SEATS of the NOBILITY and GENTRY; and other remarkable Objects: Illustrated with Copper Plates of such Implements of Husbandry, as deserve to be generally known; and Views of some picturesque Scenes, which occurred in the Course of the Journey.

La seule voie de se procurer un corps complet d'agriculture seroit, sans doute, de rassembler les diverses observations qu'auroient fourni dans chaque province.

ENCYCLOPEDIE.

VOL. IV.

L O N D O N,

Printed for W. STRAHAN; W. NICOLL, N^o 51. in St.
Paul's Church-yard; B. COLLINS, at Salisbury;
and J. BALFOUR, at Edinburgh.

MDCCLXX.

SIX MONTHS TOUR THROUGH THE NORTH of ENGLAND.

CONTAINING
An Account of the picture Galleries, and
Mansions, and Reputation, in several
Counties of this Kingdom.

- PART II. A HISTORY OF THE NORTH OF ENGLAND.
- I. The History, Value, and Extent of the Soil.
 - II. The State of the People, and the Extent of their Trade, and the Population, and various Manners of Culture.
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 - IV. The State of the People, and the Extent of their Trade, and the Population, and various Manners of Culture.
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INTERESTED
With Descriptions of the State of the North and of the
and other remarkable Objects: and a History of the
and of the various Manners of Culture.

In this volume is to be found an account of the
and of the various Manners of Culture.

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A

SIX MONTHS TOUR, &c.

LETTER XXIV.

FROM Oxford I took the road to London by Henley; the soil various for several miles, consisting both of clay, sand, gravel, and loam. At Bensington it is also of several sorts, as gravel, sand, strong clay, and what they call a marne, that is, between chalk and clay. The open fields let from 11s. to 15 s. per acre; inclosed from 20 s. to 40s. Farms rise from 40l. to 1400 l. a year.

The courses are,

1. Fallow

2. Wheat

3. Beans

4. Barley.

Also,

1. Turneps

2. Barley

3. Wheat

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4. Beans

4. Beans
5. Barley
6. Clover.

Likewise,

1. Turneps
2. Barley
3. Clover
4. Wheat
5. Turneps
6. Wheat.

They plough three or four times for wheat, sow two bushels, the time extremely various, from *july* to *candlemas*: Several farmers have of late years gained very fine crops from spring sown wheat. The average produce they reckon at three quarters and a half. For barley they stir twice or thrice, sow two bushels and a half in *march*, and calculate four quarters the mean produce. For oats they plough but once, sow the same quantity as of barley, and gain upon a medium six quarters and an half; twelve quarters have been known more than once from one acre.

They give but one earth for beans, sow two bushels, dibble them in by a line in rows twenty inches asunder; hand hoe them twice, and sometimes hand weed them.

them. The setting is 4s. an acre; the hoeing 4s. a time; and the weeding 3s. The average produce five quarters. They likewise plough but once for pease, dibble them in in the same manner as beans, one bushel and three quarters *per* acre, hoe twice, and weed if necessary; the mean crop four quarters.

Rye they sow on one ploughing on a wheat stubble, not for a crop of the grain, but to mow green for cattle, and also to feed sheep in the spring.

For turneps they plough from twice to five times, as it happens; hoe them once or twice, as necessary, and reckon the average value at 2l. 10s. an acre; use them for sheep.

Clover they sow with barley or oats; mow it once, and get two tons of hay at an average.

Tares they sow for mowing green: they feed horses in the stable with them, and tether bullocks on them; they fatten greatly.

Chalk is their principal manure; they lay forty three-horse cart loads on an acre, which cost 4l. They dig often twenty yards deep before they come to it: It is of an hard nature, but lasts good for

twelve years : they find it answers best on cold clay soils.

Rags they have from *London* at 5 s. 6 d. the hundred weight ; eight hundred is sufficient for an acre ; they last for about three or four years, and are best on gravelly soils.

Malt-dust they also use ; lay six or eight sacks on an acre, at 3 s. 6 d. a sack.

They give 3 d. a bushel for coal ashes at *Oxford*, and then have the expence of the carriage.

Good grafs letts from 40 s. to 3 l. It is chiefly applied to dairying : one acre will carry a cow through the summer. They manure the pastures well with dung and mold, and ditch-stuff, mixed together, and soap ashes.

The breed of cattle the long horned ; the oxen fat to sixty score.

Hogs fat in common to thirty score ; Mr. *Sellwood*, in this neighbourhood, fattened one to fifty-seven score, which is certainly an astonishing weight.

They reckon the product of a cow at 7 l. 7 s. The winter food is hay, of which they eat an acre and half. Ten the proper number for a dairy-maid.

The

The flocks of sheep rise from an hundred to a thousand ; the profit 20 s. a head, with folding : Some farmers I conversed with valued the folding at 3 *d.* a night *per* score ; others at 4 *d.* and 6 *d.* Some asserted it was a cheaper manure at 8 *d.* than many used in that country. They give them straw till lambing, then hay and turneps. The average fleece 6 *lb.*

In their tillage they reckon five horses necessary for an hundred acres of arable clay land, and three for as much light land. In the first they use five in a plough, in the latter only two. In the light soils they do an acre and half a day, and in the clay three quarters of an acre, or an acre.

The annual expence of a horse they calculate at 10 *l.*

Their stubbles for a fallow they do not break up till after spring sowing. In clay they stir three inches deep, in light soils four. The price of ploughing 6 s. an acre.

The hire of a cart, three horses, and driver, 7 s. a day.

Great quantities of straw cut into chaff.

In the hiring and stocking of farms, they calculate that 300 *l.* is sufficient for one hundred pounds a year.

Land sells at thirty years purchase.

Tythes generally compounded; 3 s. an acre round.

Poor rates 2 s. in the pound; the employment chiefly pilfering and idleness; but all drink tea, and many have their hot rolls with it.

The following are the particulars of several farms in this neighbourhood:

2000 acres, all arable

£. 1450 rent

40 horses (worth 25 l. each.)

20 cows

8 young cattle

700 sheep

17 men

5 boys

5 maids

20 labourers

10 waggons

10 carts

10 ploughs.

Another,

600 acres in all

50 grafs

550 arable

£. 525 rent

16 horses

20 COWS

20 cows
500 sheep
4 men
3 boys
3 maids
7 labourers
4 waggon
6 carts
5 ploughs.

Another,

460 acres in all
50 grafs
410 arable
£.400 rent
13 horfes
20 cows
5 young cattle
200 sheep
4 men
2 boys
3 maids
6 labourers
4 waggon
4 carts
4 ploughs.

Another,

300 acres in all
30 grafs

270 arable
 £. 200 rent
 14 horses
 21 cows
 200 sheep
 4 men
 2 maids
 10 labourers
 6 waggons
 6 carts
 8 ploughs.

Another,

60 acres in all
 5 grafs
 55 arable
 £. 46 rent
 6 horses
 5 cows
 1 boy
 1 labourer
 2 carts
 1 plough.

L A B O U R.

In harvest, 40s. for a month, and board.
 In hay time, 1s. a day, and beer.
 In winter, 1s. and beer.

Reaping

Reaping wheat, 6 s.
 ——— beans, 4 s.
 Mowing barley, 1 s. 2 d.
 ——— oats, 1 s. 2 d.
 ——— grafs, 1 s. 8 d.
 Hoeing turneps, 5 s.
 ——— beans, 4 s.
 Ditching, 6 d. a perch.
 Threshing wheat, 2 s. a quarter,
 ——— barley, 1 s.
 ——— oats, 10 d.
 ——— beans, 10 d.
 Amount of a year's earnings, 22 l.
 First man's wages, 10 l. 10 s.
 Next ditto, 8 l.
 Boy of ten or twelve years, 1 l. 15 s. to 2 l.
 Dairy maids, 3 l. 10 s.
 Other ditto, 2 l. to 2 l. 10 s.
 Women *per* day in hay time, 6 d. and beer.
 Picking stones in winter, 6 d. to 1 s. 6 d. a
 load of twenty bushels.
 Value of a man's board, washing, and
 lodging, 10 l.

I M P L E M E N T S, &c.

A waggon, 24 l.
 A cart, 8 l. 8 s.
 A plough, 5 l.

A har-

A harrow, 30 s.
 A roller, 3 l. to 6 l.
 A scythe, 3 s. 6 d.
 A spade, 3 s.
 Laying a share and coulter, 8 d. to 1 s.
 Shoeing, 1 s. 8 d.

PROVISIONS, &c.

Wheaten bread, best, 1½ d.
 Cheese, 4 d.
 Butter, 6 d. whey.
 Beef, 3 d.
 Mutton, 3½ d.
 Veal, 3 d.
 Pork, 4 d.
 Milk, ½ d. per pint.
 Potatoes, 6 d.
 Candles, 7 d.
 Soap, 7 d.
 Labourer's house rent, 30 s.
 — firing, 20 s. to 30 s.
 — tools, 2 s. 6 d.

BUILDING.

Bricks, 18 s. per thousand.
 Tiles, 18 s.
 Oak timber, 2 s.

Ash,

Ash, 1s. 3d.

Elm, 10d. to 1s. 2d.

Mason *per* day, 20d.

Carpenter, 20d.

Thatcher, 1s. 6d. and beer.

Farm-houses, of brick and stone, and tile.

In the parish of *Benfington* are,

4500 acres

8 farms

150 acres of common

60 labourers

100 horses

100 cows

1500 sheep

£. 1800 rent.

I forgot to tell you, that they cultivate sainfoine hereabouts, on the light chalky soils: They sow a sack an acre: It lasts good for fifteen or sixteen years. It is always mown once every year; yielding, on an average, from 50 *cwt.* to three tons *per* acre: The second crop is fed off with lambs, after they are taken from the ewes: When it is broke up it is for turneps.

Passing *Benfington* four or five miles, land, I found, lett at from 12s. to 25s. an acre; and farms from 50l. to 200l. a year.

About

About *Henley on Thames* the soil is gravelly chalk, light loams, and clay. Letts from 10 s. to 20 s. an acre; average 17 s.

Farms from 40 l. to 100 l. a year.

Their courses,

1. Turneps
2. Barley
3. Clover
4. Wheat
5. Barley
6. Pease
7. Wheat.

And,

1. Fallow
2. Wheat
3. Barley
4. Pease, or Oats.

The average crops are,

Of wheat, three quarters,

Of barley, three,

Of oats, three.

Turneps they hoe once, and reckon the average value at 3 l.

The product of a cow they calculate at 6 l.

The chief manure is chalk; they lay fifteen three-horse cart loads *per* acre, which costs

costs 6*d.* a load. Flocks of sheep 100 to 150.

In their tillage they reckon six horses necessary for the management of fifty acres of arable land. They use four in a plough, and do an acre a day; the price from 5*s.* to 7*s.* 6*d.*

Poor rates 1*s.* 6*d.* in the pound.

The following are particulars of farms.

60 acres in all
40 arable
20 grafs
£.50 rent
8 horses
6 cows
15 sheep
5 young cattle
3 men
2 boys
1 maid
2 labourers.

Another,

100 acres in all
70 arable
30 grafs
£.84 rent
8 horses
10 cows
5 young cattle

2 fatting.

2 fattening beasts

30 sheep

2 men

1 boy

1 maid

2 labourers.

Another,

40 acres in all

10 grafs

30 arable

£. 36 rent

5 horses

4 cows

2 young cattle

1 boy.

L A B O U R.

In harvest, 2 s. and beer.

In hay time, 1s. 6d. and ditto.

In winter, 1s. and ditto.

Reaping, 5 s. to 10 s.

Mowing barley, 1s. to 1s. 6d.

————— oats, 1s. 3d.

————— grafs, 1s. 6d.

Hoeing turneps, 5 s.

Ditching, 6d. a perch.

Women *per* day in harvest, 1s. and beer.

In

In hay time, 6 *d.* and beer.

First man's wages, 8 *l.*

Next ditto, 5 *l.* to 6 *l.*

Boy of ten or twelve years, 2 *l.*

Dairy maids, 4 *l.*

Other ditto, 3 *l.*

PROVISIONS, &c.

Wheaten bread, 1 *d.*

Cheese, 4 *d.*

Butter, 7 *d.*

Beef, 3½ *d.*

Mutton, 3½ *d.*

Veal, 3½ *d.*

Pork, 4 *d.*

Bacon, 6½ *d.*

Candles, 7 *d.*

Soap, 7 *d.*

Labourer's house rent, 40 *s.* to 50 *s.*

———— firing, 40 *s.*

———— tools, 7 *s.* 6 *d.* to 10 *s.*

Between *Henley* and *Maidenhead* land
letts from 7 *s.* 6 *d.* to 20 *s.* an acre. Farms
rise from 40 *l.* to 100 *l.* a year.

About the latter town the soil is either
clay, or a good loam, and letts at 20 *s.* an
acre

acre on an average. Farms from 50 *l.* to 500 *l.* a year. A common course here,

1. Fallow

2. Wheat

3. Barley

4. Pease

5. Wheat

6. Barley.

Very little fallowing; they run often eight or ten crops to a fallow. The average produce,

Of wheat, three quarters and a half,

Of barley, four,

Of oats, five,

Of pease, three and a half.

Their turneps they hoe once or twice, and reckon the average value at 45 *s.*

The product of a cow they calculate 7 *l.* 10 *s.*

The flocks of sheep rise to 500.

They use four horses in a plough, and do an acre, or an acre and half a day. The price 5 *s.* and depth about five inches.

The employment of the poor women and children is a little spinning, but much lace making, at which the women earn 10 *d.* or 15. a day; girls from 4 *d.* to 6 *d.*

The

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The following particulars of farms in
this neighbourhood will shew the general
economy of it.

420 acres in all

360 arable

60 grafs

£.400 rent

18 horses

2 cows

400 sheep

4 men

3 boys

1 maid

8. labourers

3 waggons

3 carts

3 ploughs.

Another,

300 acres in all

250 arable

50 grafs

£.280 rent

13 horses

8 cows

4 young cattle

200 sheep

2 men

2 maids

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6 12

6 labourers

3 waggons

3 carts

3 ploughs.

Another,

200 acres in all

40 grafs

160 arable

£.200 rent

10 horfes

5 cows

5 fatting beafts

50 fheep

1 man

2 boys

1 maid

6 labourers.

Another,

100 acres in all

20 grafs

80 arable

£.95 rent

6 horfes

4 cows

3 young cattle

1 boy

2 labourers

2 carts

2 ploughs.

L A B O U R.

In harvest, 1s. 6 d. and board.

In hay time, 1s. 6 d. and beer.

In winter, 1s. and beer.

Reaping, 6 s. 6 d. to 7 s.

Mowing barley, 1s.

—— ditto, and cocking, 2s.

—— oats, ditto.

—— grass, 1s. 6 d. to 2s.

Cutting pease, 2 s. 6 d.

Hoeing turneps, 5 s.

Ditching, 4 d.

First man, 7 l. 7 s.

Second ditto, 5 l.

Boy of ten or twelve years, 40 s.

Dairy maids, 4 l.

Other ditto, 3 l. to 3 l. 10 s.

Women *per* day in harvest, 1s. and beer.

In hay time, 8 d.

In winter, 6 d.

P R O V I S I O N S, &c.

Bread, wheaten, 9 lb. 11 d.

Cheese, 4 1/2 d.

Butter, 7 d.

Beef, 3 1/2 d.

C 2

Mutton,

Mutton, $3\frac{1}{2}d.$

Veal, $4d.$

Pork, $4d.$

Bacon, $6\frac{1}{2}d.$

Milk, $\frac{1}{2}$ per pint.

Potatoes, $6d.$

Candles, $7d.$

Labourer's house rent, $40s.$ to $3l.$

———— firing, $2l. 10s.$

———— tools, $5s.$

About *Colnbrook* and *Salt-hill* land lets on an average of $20s.$ an acre; farms from $40l.$ to $100l.$ a year.

At *Harmondsworth* the soil is gravel and loam; the rent $20s.$ Farms from $40l.$ to $200l.$ a year. The average of crops,

Of wheat, two quarters and a half.

Of barley, four.

Of beans, four and a half, set in rows and hoed.

Of pease, two.

Turneps they hoe once, reckon the average value at $40s.$ an acre.

Good grafs lets at $30s.$ An acre will summer feed a cow. The product of a cow they calculate at $6l. 10s.$

They are attentive to the enriching their lands by manure from *London*, and also fold

fold all their sheep, the profit *per* head of which animal they calculate at 12 s.

In their tillage they use four horses in a plough, do an acre and half a day, stirring about four inches deep. The price 5 s. 6 d. an acre.

Fallows are scarcely known: they keep the land in good heart, and always crop.

The following is a common course here:

1. Turneps
2. Barley
3. Beans
4. Wheat
5. Pease
6. Wheat
7. Barley.

The following particulars of farms will explain the general œconomy:

- 100 acres, all arable
- £. 90 rent
- 8 horses
- 6 cows
- 100 sheep
- 1 man
- 1 boy
- 1 maid
- 3 labourers.

C 3

Another,

Another,

160 acres in all

30 grafs

130 arable

£.150 rent

10 cows

5 young cattle

80 sheep

2 men

2 boys

2 maids

5 labourers.

Another,

80 acres in all

10 grafs

70 arable

£.80 rent

5 cows

30 sheep

1 man

1 boy

1 maid

2 labourers.

Another,

40 acres in all

5 grafs

35 arable

£.45 rent

5 cows

5 cows
20 sheep
1 boy,

LABOUR, &c.

In harvest, 2 s. and beer.
In hay time, 1 s. 4 d. and beer.
In winter, 1 s. and ditto.
Reaping wheat, 6 s. to 10 s.
Mowing barley, 1 s. to 2 s.
—— pease, 2 s.
—— grass, 2 s.
Ditching, 4 d. to 6 d.
Hoeing turneps, 5 s.
First man's wages, 9 l. to 10 l.
Second ditto, 7 l.
Boy of ten or twelve years, 3 l.
Maids, 3 l. to 3 l. 10 s.
Women *per* day in harvest, 1 s. and board,
In hay time, 8 d. and beer.

PROVISIONS, &c.

Bread, 1½ d.
Cheese, 4 d.
Butter, 7 d.
Beef, 3½ d.
Mutton, 3½ d.

Pork, 4 *d.*

Veal, 4 *d.*

Bacon, 6 *d.*

Milk, $\frac{1}{2}$ *per* pint.

Potatoes, 4 *d.*

Candles, 7 *d.*

Soap, 6 $\frac{1}{2}$ *d.*

Labourer's house rent, 3 *l.* to 4 *l.*

———— firing, —turf, and labour.

———— tools, 7 *s.* 6 *d.*

When I came among the gardens at *Hammer Smith* I repeated my enquiries among the gardeners, that I might gain some insight in that perfection of culture.

Good nursery land lets there from 2 *l.* to 4 *l.* in general, and to 6 *l.* if walled. The nurseries rise from five to fifty acres. One of twenty acres will employ from eight to ten hands constantly, at 10 *s.* 6 *d.* a week in summer, and 9 *s.* in winter. They never use any dung, reckoning it poison.

The kitchen gardens let, on an average, at 3 *l.* an acre: One of twenty acres will employ all the year four men if ploughed; and if dug eight, at 10 *s.* 6 *d.* a week the year round. Likewise four women in winter, and twenty in summer, at 5 *s.* a week the year round.

Their

Their carrots they grow on stiff as well as light land; hoe them three times with a five inch hoe; costs 10 s. a hoeing *per* acre.

Parsnips they hoe twice, to the distance of fourteen inches; costs 10 s. a hoeing. Of this root the product is very seldom so large as of carrots.

Onions they hoe three times, at the expence of 4 l. an acre.

Turneps they hoe twice with seven inch hoes. (N. B. They do not want them to grow to a large size.) Costs 10 s. the two hoeings.

Potatoes they hoe to fourteen inches every way, at twice, which costs 3 s. 6 d. a time.

The white *Dutch* cabbage they reckon the largest, but frosts will kill it. *Quere*, therefore, why not cultivate in the field, to come in before the other sorts are ready, for a succession all winter.

At *Kensington* I came again among some farmers. Their soil is various, clay, sand, and gravel; letts in farms at 2 l. an acre, on an average. Farms from 50 l. to 400 l. a year. Their courses are extremely various;

ous; among others they use the following.

—Scarce any fallowing.

1. Pease, for market, got off time enough for
2. Turneps
3. Wheat
4. Horse-beans
5. Wheat.

And,

1. Beans, for market, off time enough for
2. Turneps
3. Wheat
4. Horse-beans
5. Wheat.

Also,

1. Pease or Beans, for market, off in time for
2. Turneps
3. Wheat
4. Tares
5. Horse-beans
6. Wheat.

Another,

1. Pease or Beans as before
2. Turneps
3. Wheat
4. Oats

5. Horse-

5. Horse-beans

6. Wheat.

Another,

1. Pease as before

2. Turneps

3. Tares

4. Potatoes

5. Barley

6. Clover and ray grass for two years.

They plough three times for wheat, sow two bushels and a peck, and reap six quarters. For barley they stir twice, and gain eight quarters. For beans they also give but one ploughing, dibble them in in rows, hand hoe them thoroughly, and gain six quarters. For turneps they plough once or twice, hoe them twice, at the expence of 5 s. an acre each hoeing, and reckon the value at 6 l. 10 s. or 7 l. on the ground.

For potatoes they dung well and plough; set them in drills one foot asunder, and the sets six inches from each other, hoe them twice and hand weed them: The average value 15 l. an acre as they grow.

Their manure all comes from *London*, chiefly horse dung, costs 1 s. a four horse cart load, and a pint of beer. No coal ashes.

L A-

LABOUR, &c.

In harvest, 12 s. a week, and beer.

In hay time, 9 s. and beer.

In winter, 9 s.

Average of the whole year, 10 s. 6d.

Reaping wheat, from 10 s. to 20 s.

Mowing corn to bind and shock, 3 s.

—————grafs, 3 s. to 5 s.

Hoeing turneps, 5 s.

—————beans, 7 s.

First man's wages, 10 l. to 10 l. 10 s.

Next ditto, 7 l. to 7 l. 7 s.

Boy of ten or twelve years, 3 l.

Maids, 4 l. to 5 l.

Women *per* day in harvest, 10 d. and board.

In hay time, 10 d. and beer.

In winter, 8 d.

PROVISIONS, &c.

Bread, 10½ d. the half-peck loaf.

Cheese, 4½ d.

Butter, 6½ d. to 7 d.

Beef, 2½ d.

Mutton, 3½ d.

Veal, 3½ d.

Pork, 4 d.

Milk, 1 d. *per* pint.

Pota-

Potatoes, 5 s.

House rent, 4 l. to 6 l.

Gardens here lett from 2 l. 2 s. to 5 l. 5 s. an acre.

Passing through *London*, I returned home by *Highbate* and *Barnet*, through a prodigious fine tract of grass farms, that lett from 1 l. 15 s. to 4 l. an acre. But when passed *Barnet*, the soil declines greatly, and falls in rent to 18 s. 1 l. and 1 l. 10 s. and in a few miles gets down to 15 s. on an average.

Enfield-chace cannot be viewed by any lover of his country, or of husbandry, without much regret; so large a tract of waste land, so near the capital, within the reach of *London*, as a market, and as a dunghill, is a real nuisance to the public. The soil is capable of yielding any production, being either a rich clay, or a good gravel; the luxuriant growth of the spontaneous productions prove sufficiently what the cultivated ones might be: If this tract of useless land was enclosed, with farm houses, and proper offices built, it would lett at once for 15 s. an acre, without further expence. It is undoubtedly worthy of his Majesty's consideration, whether the noble

ble improvement of his private revenue; which might in this, as well as many other instances, be easily made, is not very well worth some attention, in points wherein the good of the whole nation is in proportion to the increase of the profit of the crown.

* * * * *

And now, Sir, being at last arrived at home, after so long a journey, you may naturally expect I should give you some information of *my own*, after acquiring so much of almost every person I have met with:—I shall therefore minute, under the preceding heads, the husbandry of this neighbourhood.

The soil is extremely various: Here are many tracts of strong clay land; some of a stiff loam; others of a light loam; but in general it is a blue pebbly gravel; amazingly unkind in the production of any crop without plenty of manure. Rents rise from 5s. an acre to 20s. a few spots at 30s. The average I reckon at 12s.

Farms from 20l. to 180l.

The principal course, subject however to numerous variations, according to circumstances, is this:

1. Fallow

1. Fallow
2. Wheat
3. Pease
4. Oats
5. Turneps
6. Barley
7. Clover
8. Oats.

For wheat they plough four or five times, sow two bushels and a half about *Michaelmas*, and reap on an average twenty bushels.

For barley they give two earths, sow three or four bushels in *March* or *April*, and gain upon an average three quarters.

They stir but once for oats, sow three or four bushels about the same time with barley, and reckon the average product at four quarters.

But few beans.

For pease they give but one ploughing, sow two bushels and a half in *February*, never hoe them, and gain about three quarters in return. But they have several soils with variations of management.

They plough three times for turneps, hoe once or twice as requisite, and calculate the average value *per acre* at 30*s.* use them chiefly for sheep.

Clover

Clover they sow with oats or barley; always mow it, and generally twice; gain about two and a half or three loads of hay at the two mowings; a load is thirty-six trusses, of fifty-six pound each, or eighteen hundred weight.

Tares they sow both for feeding green, making into hay, and for a crop of the corn. If for hay, they get about a load *per* acre. Of seed, two quarters.

In the article of manuring they are very attentive; indeed the poorness of the soil renders this highly requisite.

Chalk the best farmers among them use in considerable quantities. There is a stratum of it under all this country, but in some places it lies sixty, seventy, and eighty feet below the surface, in which case it does not answer to get it; the general depth is from ten to forty feet. The workmen who make it their business to draw chalk, generally fix upon the lowest places that are not wet to sink their pits in: They dig them in the nature of a well, and use a winch and tub like a bucket, which holds about a bushel and three-quarters, to wind up the chalk. The common price is 4 *d.* *per* foot for the well until they come
at

at the chalk pit; and 6*d.* a load of eighteen tubs of it, laid in heaps about the pit.

The farmers lay on from fifteen to thirty loads an acre, which they reckon a good dressing, and will last twelve or fifteen years, and sometimes twenty, in tolerable heart; but as it is not a fat soapy kind, I apprehend this quantity much too small; sixty, seventy, or eighty, and even a hundred, would be of much more than a proportional benefit.

From *London* they bring many sorts of manure: They carry up hay, straw, or chaff cut out of straw or hay, and come down loaded with bones, cows or hogs hair, cows hoofs, coal ashes, foot, horse-dung, &c. The hair and hoofs are about a guinea a load, of forty bushels. Bones from 8*s.* to 15*s.* coal-ashes, 2*s.* 6*d.* to 5*s.* and horse-dung, 1*s.* or 1*s.* 6*d.* For this work waggons are much wanted, but most of it is done with carts.

The same team and men go three times a week, setting out about ten, eleven, or twelve o'clock on *Sunday* night, and return about five o'clock on *Monday* afternoon. *Tuesday* is a broken day for odd jobbs, or a little ploughing. At night they go

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again, and return on *Wednesday*. *Thursday* is another idle day: At night they go again, and return on *Friday*. *Saturday* a little ploughing done. If they begin on *Monday* night (instead of *Sunday*) they then finish on *Saturday* night instead of *Friday* night. The intermediate days are, however, often employed in getting ready the load; and if not, they are of little value to the farmer, as the horses, having been worked pretty hard, want rest, and the men will always be ready enough to take it. Some few go on purpose for manure, without carrying a load up, but the expence is very heavy, and some think can scarcely answer, which is a point I design trying experimentally.

Bones are a very odd manure, but they find them of great benefit to their clay lands, and will last twenty years good.

Very good grass will lett for 20s. an acre; I mean *very good* in comparison with the rest. It is chiefly applied to feeding cows for dairying, but more for suckling. An acre and half they reckon sufficient for the summer feed of a cow. In winter they feed them on hay, straw, and turneps. Those in milk all on hay, and calcu-

calculate that they eat on an average two loads. The joist in a straw yard is 9*d.* a week, and in summer, 1*s.* The annual product, whether in dairying or suckling, they calculate at from 4*l.* to 8*l.* The quantity of milk two or three gallons a-day. Much more suckling than dairying.

The breed most common is the *Welsh*. The calves suck eight, nine, or ten weeks. To ten cows in a dairy they keep about three sows, but sell off the pigs young. Eight or nine cows the common number for a dairy maid to look after.

Their hogs fat up to thirty stone (eight pounds.)

The flocks of sheep are extremely various, from twenty to three hundred; the profit is differently calculated; I have heard it laid from 7*s.* to 12*s.* and some to 15*s.* a head. The winter and spring food is grass, hay, and turneps; the winter joist 1½*d.* and 2*d.* a week. But in summer, as soon as the corn is got in, any farmer will give the feed for the benefit of folding them. All are folded here, even so few as twenty or thirty. The fleeces from one pound and a half to six pounds.

In their tillage they reckon eight horses necessary for an hundred acres of arable land: Use four in a plough, (of a vile enormous heavy construction) with a driver, and do about an acre day. They break up their stubbles for a fallow soon after *christmas*, plough from four to six inches deep; the price 5*s.* *per* acre.

The hire of a cart, three horses, and driver, 10*s.* a day.

They reckon the annual expence of a horse at 10*l.* The summer joist is 2*s.* a week, and that of the winter, in a straw yard, 1*s.* 6*d.* Vast quantities of both hay and straw are cut into chaff, the price of cutting 1*d.* a bushel, each bushel (in chaff measure) two strikes; and a man will earn at it, if a good hand, from 3*s.* to 4*s.* a day.

There is much both to commend and disapprove in their fences; for their hedges are admirable, but they have no ditches, by which means the hedge suffers greatly, and turns out an indifferent fence. Their method of making them is that of plashing; when they cut the old hedge they leave abundance of wood standing, and some of it very large. Many of the sticks thus left are cut off at a proper height for hedge stakes; then

then the rest of the wood left is bent down, and interwoven with dead bushes, among the hedge stakes; and such of the living wood as is too large to bend, they cut it enough at bottom to make it. Thus the hedge is partly living and partly dead; but as it is well intermixed, and grows in its horizontal posture, and many of the stakes being alive, the hedge remains a long time impenetrable; so that if you look into a very old one you will see much of the dead hedge standing in it; and were there good ditches, all of it would remain.

In *Suffolk, Norfolk, &c. &c.* in ditching, they cut up all the wood, and make the hedge totally of that which is dead; the consequence of which is, the stakes presently rot, and give way, and a horse, or even a sheep, breaks through and makes a large gap; and a high wind carries away whole perches of it. The method of this country is infinitely preferable, and would, with *Suffolk* ditches, form impenetrable fences.

The following sketches of several farms in this neighbourhood, will shew the general œconomy of it:

200 acres in all

140 arable

60 grafs

£.36 rent

8 horfes

6 cows

40 fheep

2 men

1 boy.

2 maids

1 labourer

4 carts

2 ploughs.

Another,

300 acres in all

40 arable

260 grafs

£.40 rent

5 horfes

18 cows

5 young cattle

50 fheep

1 boy

2 maids

1 labourer

6 carts

2 ploughs.

Another,

Another,

70 acres in all
30 arable
40 grafs
£.50 rent
4 horfes
2 cows
1 man
1 maid
2 carts
1 plough.

Another,

80 acres in all
70 arable
10 grafs
£.60 rent
6 horfes
8 cows
100 ſheep
2 men
1 boy
1 maid
4 carts
2 ploughs.

Another,

200 acres, all arable
£.130 rent
10 horfes

D 4

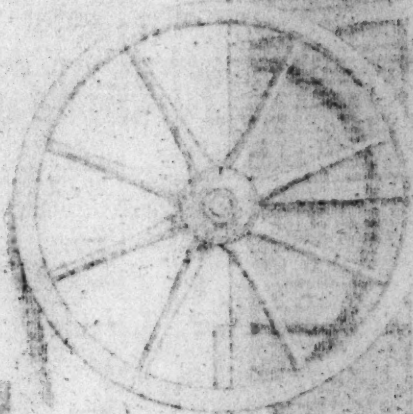
5 cows

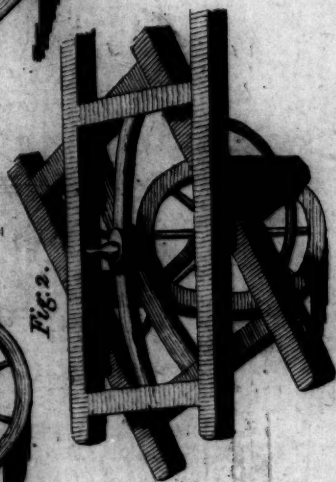
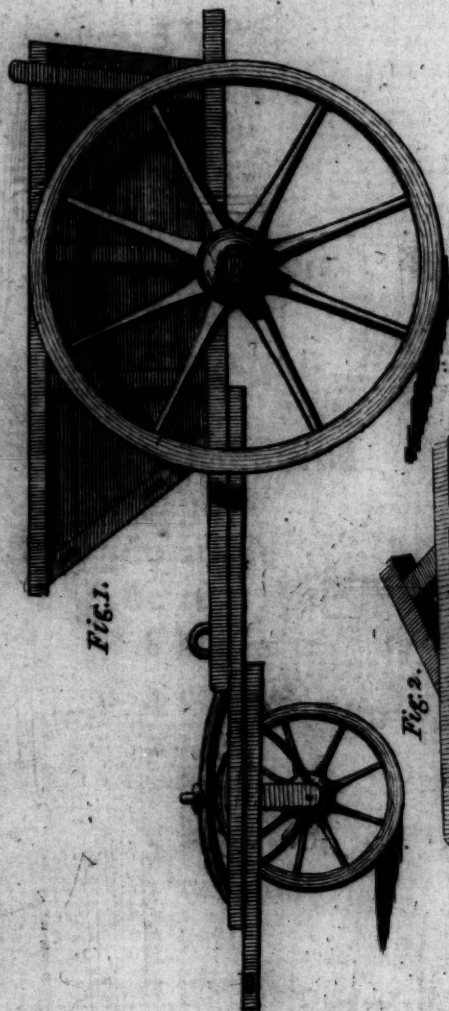
5 cows
100 sheep
4 men
3 boys
1 maid
6 labourers
6 carts
3 ploughs.

Another,

100 acres in all
40 grafs
60 arable
£.60 rent
8 horfes
4 cows
2 men
1 boy
5 labourers
1 waggon
5 carts
3 ploughs.

Such numbers of carts as some of these farmers use are very useless; one waggon would be preferable to many of them. I should, however, remark, that in their carts one sort is extremely useful, viz. small three wheeled ones, with broad wheels, that hold from twelve to fifteen bushels





buffels of earth, and are used on grass land all winter long, without cutting or poaching, which is a prodigious useful circumstance. Here follows a draft of one.

Plate 1. Fig. 1.

			Feet.	Inches.
a to b	—		4	6
e f	—		3	8
b c	—		2	0
c b	—		4	0
b i	—		3	4
k l	—		2	0

Fig. 2. the fore-wheel at large.

In the hiring farms they reckon three rents will stock.

Land sells from twenty-six to thirty years purchase. Many small estates from 50/. to 400/. a year.

Tythes compounded for, some in the general for a whole farm, some by the acre. Wheat 4 s. turnep land, barley 4 s. oats, pease, beans, and vetches, 2 s. Mowing ground, 2 s.

Poor rates 1 s. 6 d. to 2 s. 6 d. in the pound.

The employment of the poor women and children is a little spinning, and but little; All drink tea.

The farmers carry their corn about ten miles, that is, to *Hertford*; some six miles, to *St. Albans*.

Terms various, from seven to twenty-one years.

L A B O U R.

In harvest, 36s. to 37s. for a month, and board.

In hay time, 1s. 6d. a day.

In winter, 1s. 2d.

Reaping wheat, 5s. to 10s.

Mowing barley and oats, 1s. 6d. to 2s.

———grafs, 2s. to 5s.

Hoeing turneps, 4s. 6d. to 5s. 6d.

Hedging, 6d. to 1s. a perch.

Threshing wheat, 2s. 2s. 6d. and 3s. a quarter.

———barley, 1s. to 1s. 6d. and 1s. 8d. a quarter.

———oats, 1s.

Amount of a year's earnings, 25l. to 30l.

First man's wages, from 10l. to 12l. 12s.

Second ditto, 7l. to 9l.

Boy of ten or twelve years, 2l. 2s. to 2l. 10s.

Maids, 4l. to 5l. 10s.

Women *per* day in harvest, 1s.

———In hay time, 10d.

———In winter, 6d.

I M P L E -

IMPLEMENTS, &c.

- A cart, 10*l.* to 12*l.*
- A three wheeled ditto, 6*l.* 6*s.* to 7*l.*
- A plough, 3*l.* 3*s.*
- A harrow, 1*l.* 10*s.* to 2*l.*
- A roller, 1*l.* 10*s.* to 2*l.* 15*s.*
- A scythe, 4*s.* 6*d.* to 5*s.*
- A spade, 4*s.* to 4*s.* 6*d.*
- Shoeing, 2*s.*

PROVISIONS, &c.

- Bread, 1 $\frac{1}{2}$ *d.*
- Cheese, 4 *d.* to 4 $\frac{1}{2}$ *d.*
- Butter, 8 *d.*
- Beef, 3 $\frac{1}{2}$ *d.*
- Mutton, 3 $\frac{1}{2}$ *d.*
- Veal, 4 $\frac{1}{2}$ *d.*
- Pork, 4 $\frac{1}{2}$ *d.*
- Bacon, 7 *d.*
- Milk, 1*d.* per pint.
- Potatoes, 5 *d.*
- Candles, 7 *d.*
- Soap, 7 *d.*
- Labourer's house rent, 2*l.* to 5*l.*
- firing, turf, ling, heath, &c.
- tools, 7*s.* 6*d.*

From

From this slight sketch, it is evident, we have much to amend in common with our neighbours.

And now, having at last brought the register of this tour to a conclusion, you must next allow me to make such general remarks on the substance of the intelligence, as are requisite for the deduction of useful maxims; without these, this long ramble would lose much of the benefit which I apprehend may be extracted from it; but of that you will, from the succeeding letters, be a better judge.

I am, &c.

LET.

LETTER XXV.

UPON reviewing the particulars of this journey, I am struck with a vast variety of materials, that call for an examination of so refined and dextrous a nature, that I am in pain at the undertaking: I have hitherto given the mere register of a journey, and inserted in it a variety of articles, with an eye to reduce all to averages, and from them to draw such conclusions as their nature dictated: But now the grand object is before me, I want several penetrating political arithmeticians at my elbow to point out the combinations between different, and seemingly distinct circumstances, too many of which will, I fear, escape me; however, relying on your candour, I shall attempt this most important part of my undertaking, and offer such remarks as appear to me to be demanded by the preceding intelligence.

The first circumstance I shall examine is the soil, the rent of it, and the product in grain, *viz.* wheat, rye, barley, and oats.

I keep

I keep these distinct from pulse, roots, &c. as they in general depend (with many exceptions, however) on the richness of the soil; whereas beans, turneps, &c. receive amazing variations from culture scarce ever given to grain.

From *Hatfield* to *Welwyn*.

Soil, a light gravel.

Rent, 12 s.

			Qrs.	B.	P.
Product.	Wheat	- -	3	1	0
	Barley	- -	4	0	0
	Oats	- -	4	0	0

Around *Stevenage*.

Soil. Much cold clay.

Rent, 9 s.

Product.	Wheat	- -	2	7	0
	Barley	- -	4	4	0
	Oats	- -	4	4	0

From *Stevenage* to *Luton*, in *Bedfordshire*, about *Offley*.

Soil. A chalky clay.

Rent, 5 s.

Product.	Wheat	- -	1	7	0
	Barley	- -	3	0	0
	Oats	- -	2	4	0

Dunstable to *Wooburn*, about *Houghton*.

Soil. Various; chalk, clay, loam, and sand.

Rent,

Rent, 14 s.

Product.	Wheat	-	-	1	7	0
	Barley	-	-	2	7	0
	Oats	-	-	3	0	0

About *Milton*.

Soil. Clay and gravel.

Rent, 13 s. 9 d.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	3	0	0
	Oats	-	-	4	0	0

Wooburn to *Newpart Pagnel*, about *Wanden*.

Soil. Sand.

Rent. Open, 7 s. 6 d. Inclosed, 11 s.

Average, 9 s. 3 d.

Product.	Wheat	-	-	3	0	0
	Barley	-	-	3	0	0
	Oats	-	-	3	0	0

About *Broughton*.

Soil. Various; much excellent.

Rent, 20 s.

Product.	Wheat	-	-	3	1	0
	Barley	-	-	5	0	0
	Oats	-	-	4	4	0

From *Newpart Pagnell* to *Bedford*, about *Astwick*.

Product.	Wheat	-	-	1	7	0
	Barley,					

Barley	-	-	3	4	0
Oats	-	-	2	2	0

This is a great bean country: the soil, tho' not minuted, I remember to be a stiff loam and clay.

About *Biddenham*.

Soil. All sorts, from gravel to clay.

Rent. Open, 3 s. Inclosed, 11 s.

Average, 7 s.

Product. Wheat - - 2 6 0

Barley - - 3 0 0

Oats - - 3 0 0

From *St. Neot's* to *Kimbolton*, about *Hale Weston*.

Soil. Gravelly loam.

Rent. Open, 7 s. 3 d. Inclosed, 17 s.

Average, 12 s.

Product. Wheat - - 1 7 0

Barley - - 3 0 0

Oats - - 2 0 0

From *Kimbolton* to *Thrapston*, about *Great Catworth*.

Soil. Clay. Some gravelly loams,

Rent, 17 s.

Product. Wheat - - 2 6 0

Barley - - 3 0 0

Oats - - 2 4 0

From

From *Thrapston* to *Oundle*, about *Ayethurch*.

Soil. Strong clay.

Rent, 5s.

Product. Wheat - - 3 0 0

Barley - - 4 0 0

Near *Stamford*, about *Casterton*.

Soil. Clay and poor sandy loam.

Rent. Open, 6s. Inclosed, 20s. Average, 13s.

Product. Wheat - - 2 4 0

Barley - - 4 0 0

Oats - - 5 0 0

From *Stamford* to *Grimsthorpe*, about *Little Byten*.

Soil. Clay and gravelly loam.

Rent, 4s.

Product. Wheat - - 2 0 0

Barley - - 2 0 0

Oats - - 1 4 0

From *Coltsterworth* to *Grantham*, about *Paonton*.

Soil. A loamy gravel.

Rent, 10s.

Product. Wheat - - 3 4 0

Barley - - 3 4 0

Oats - - 4 0 0

From *Granttham* to *Newark*, about
Fossen.

Soil. Rich clay.

Rent, 10s.

Product. Wheat - - 3 3 0

Barley - - 3 3 0

From *Newark* to *Tuxford*, about *Crom-*
well.

Soil. Sandy.

Rent, 15s.

Product. Barley - - 4 0 0

Oats - - 4 0 0

Around *West Drayton.*

Soil. A rich sandy gravel.

Rent, 11s.

Product. Barley - - 4 4 0

Oats - - 5 0 0

From *Bawtry* to *Doncaster*, around
Cantler.

Soil. Sand.

Product. Barley - - 3 4 0

Wheat - - 2 0 0

Rye - - 2 0 0

Oats - - 3 0 0

From *Doncaster* to *Rotherham*, about
Coneyborough.

Soil. A sandy gravel.

Rent, 9s.

Product.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	4	0	0
	Oats	-	-	4	0	0

From *Sheffield* to *Barnsley*, about *Ecclesfield*.

Rent, 17 s.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	4	0	0
	Oats	-	-	4	0	0
	Rye	-	-	3	6	0

At *Wooley*.

Soil. Clay.

Rent, 12 s. 6 d.

Product.	Wheat	-	-	2	6	0
	Barley	-	-	3	4	0
	Oats	-	-	5	0	0

From *Leeds* to *Tadcaster*, about *Kiddel*.

Soil. Limestone clay.

Rent, 8 s. 6 d.

Product.	Wheat	-	-	2	3	0
	Barley	-	-	4	0	0
	Oats	-	-	5	4	0

From *York* to *Barnby Moor*, about *Wilbersfort*.

Soil. Clay ; and sandy loam.

Rent, 10 s.

Product.	Wheat	-	-	3	6	0
	Barley	-	-	4	3	0

E 2

Rye,

[52]

Rye	-	-	3	1	0
Oats	-	-	6	7	0

Around *Hatton*.

Soil. Gravel.

Rent, 12 s. 6 d.

Product.	Wheat	-	-	2	1	2
	Barley	-	-	1	7	0
	Rye	-	-	2	4	0
	Oats	-	-	4	0	0

About *Barnby Moor*.

Soil. Sand and gravel.

Rent. Open, 7 s. 6 d. Inclosed, 20 s.

Average, 13 s. 9 d.

From *Market Weighton* to *Beverley*; at *Bishop's Burton*. Some rich open land, 18 s. rent, that yields very considerable products.

From *Beverley* to *Hull*, around *Risby*.

Soil. A loam on chalkstone.

Rent. Open, 6 s. 6 d. Inclosed, 12 s.

Average, 9 s. 3 d.

Product.	Wheat (open)	2	1	2
	(inclosed)	3	2	0
	Average,	2	5	3
	Barley (open)	4	2	0
	(inclosed)	5	0	0
	Average	4	5	0
	Oats			

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Oats (open)	4	0	0
(inclosed)	5	4	0
Average	4	6	0

Around Stillingfleet.

Soil. Clay and sand.

Rent, 10 s.

Product. Wheat	-	-	3	0	0
Barley	-	-	3	0	0
Oats	-	-	4	0	0
Rye	-	-	3	0	0

In Holdernefs.

Soil. Clay.

Rent, 17 s. 6 d.

Product. Wheat	-	-	4	0	0
Barley	-	-	5	0	0
Oats	-	-	5	0	0

Around Howden.

Soil. Clay.

Rent. Open, 10 s. Inclosed, 20 s.

Average, 15 s.

Product. Wheat	-	-	3	0	0
Barley	-	-	4	0	0
Oats	-	-	5	0	0
Rye	-	-	3	0	0

Around Thorne.

Soil. Strong clay.

Rent, 10 s.

E 3 Product.

Product.	Wheat	-	3	0	0
	Barley	- -	4	4	0
	Oats	- -	6	0	0

The Marquis of *Rockingham's Kentish* farm.

Soil. A rich deep black loam.

Product.	Wheat	- -	4	0	0
	Barley	- -	5	0	0
	Oats	- -	4	0	0

His Lordship's *Hertfordshire* farm.

Soil. A strong clay; and hazel loam.

Product.	Wheat	- -	2	2	0
	Barley	- -	4	0	0
	Oats	- -	5	0	0

Country around *Wentworth-House*.

Soil. Clay and loam.

Rent, 8 s.

Product.	Wheat	- -	3	3	0
	Barley	- -	5	0	0
	Oats	- -	5	0	0
	Rye	- -	3	0	0

From *Wentworth* to *Kiveton*, about *Ashton*.

Soil. Sand.

Rent. Open, 3 s. 6 d. Inclosed, 10 s.

Average, 6 s. 9 d.

About *Kiveton*.

Rent, 8 s.

From

From Kiveton to Welbeck.

Soil. Sand.

Rent, 6 s.

About Worksop.

Soil. Sandy.

Rent, 5 s. 3 d.

From Doncaster to Pontefract.

Soil. Various.

Rent, 13 s. 6 d.

About Pontefract.

Rent, 20 s.

From Pontefract to Methley.

Soil. Rich.

Rent, 25 s.

From Methley to Temple Newsam.

Soil. Very rich.

Rent, 25 s.

Product. Wheat - - 4 3 0

Barley - - 5 0 0

From Temple Newsam to Ferrybridge.

Rent, 20 s.

Around Byrom.

Soil Sand.

Rent, 20 s.

From Beverley to Driffild, around the latter place,

Soil. Clay.

Rent, 10s.
 Product. Wheat - 3 0 0
 Barley - 4 0
 Oats - 2 0 0

From *Driffeld* to *Burlington*.
 Soil. Open wolds.
 Rent, 4s. 9d. much deater in the
 few inclosures.

From *Boynton* to *Honnaby*.
 Soil. Open wolds.
 Rent, 2s. 2d.

Around *Honnaby*.
 Rent, 4s. 3d.

Around *Ganton*.
 Soil. Wolds; a light hazel loam.
 Rent, 1s.

Product. Barley - 1 0
 Oats - 4 0

About *Brumpton*.
 Soil. A rich loam on a limestone.
 Rent, 14s.

Product. Wheat - 2 4 0
 Barley - 4 0 0
 Oats - 3 0 0

Around *Reddingham-bridge*.
 Soil. Sandy.
 Rent, 6s. 6d.

Product.	Wheat	-	-	3	4	0
	Barley	-	-	5	0	0
	Oats	-	-	5	0	0
	Rye	-	-	3	4	0

From thence to *Castle Howard*.

Soil. Various.

Rent, 13s.

Around *East Newton*.

Soil. Various; loam, clay, gravel, &c.

Rent, 12s.

Product.	Wheat	-	-	3	0	0
	Barley	-	-	3	4	0
	Oats	-	-	4	0	0
	Rye	-	-	2	4	0

About *Nunnington*.

Soil. Limestone land.

Rent. Open, 3s. 3d. Inclosed, 8s. 6d.

Average, 5s. 10d.

Product.	Wheat	-	-	2	0	0
	Barley	-	-	3	0	0
	Oats	-	-	3	6	0
	Rye	-	-	3	4	0

Across *Hambledon*; about *Kirby*.

Soil. A gravelly sand.

Rent, 5s.

Mr. *Turner's* farm at *Kirkleatham*.

Soil. Clay.

Rent,

Rent, 8 s. 4 d.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	4	2	0
	Oats	-	-	5	4	0

Country around *Kirkleatham*.

Soil. Clay.

Rent, 13 s.

Product.	Wheat	-	-	3	1	0
	Barley	-	-	5	0	0
	Oats	-	-	5	0	0

At *Gilsdale*, in *Cleveland*.

Soil. Chiefly gained from moors.

Rent, 10 s. 6 d.

Product.	Wheat	-	-	2	4	0
	Oats	-	-	5	0	0
	Rye	-	-	3	3	0

From *Kirkleatham* to *Schorton*; through *Cleveland*.

Rent, 17 s. 6 d.

Towards *Schorton*.

Rent, 12 s. 6 d.

Around *Schorton*.

Soil. Loams, and gravels.

Rent, 10 s.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	4	0	0
	Oats	-	-	5	0	0
	Maslin	-	-	3	1	0

From

From *Richmond* to *Gilling*, around the latter.

Soil. Light loam, and moory clay.

Rent, 21s.

Product.	Wheat	-	-	3	1	0
	Barley	-	-	5	5	0
	Oats	-	-	5	5	0
	Rye	-	-	5	0	0

From *Gilling* to *Greta-bridge*.

Rent, 20s.

About *Rookby*.

Soil. Moory, and gravelly.

Rent, 12s.

Product.	Wheat	-	-	2	0	0
	Barley	-	-	3	1	0
	Oats	-	-	4	0	0
	Rye	-	-	3	4	0

From *Askrig* to *Fremington*, about the latter place.

Soil. Rich loam, and red gravel.

Rent, 30s.

About *Kiplin*.

Soil. Loamy gravel, and wet clay.

Rent, 12s. 6d.

Product.	Wheat	-	-	2	5	2
	Barley	-	-	4	0	0
	Oats	-	-	3	6	0

Mr.

Mr. Crowe's husbandry at Kiplin.

Soil. Gravel and clay.

Rent, 12 s. 6 d.

Product.	Wheat	-	-	4	0	0
	Oats	-	-	7	0	0

Kiplin to Swinton; about the latter.

Soil. Loam and gravel.

Rent. Old land, 16 s. 6 d.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	2	4	0
	Oats	-	-	3	0	0
	Rye	-	-	2	4	0

Moor-side country, near Swinton.

Soil. Light loams; sandy gravels, and moory.

Rent, 4 s.

Product.	Oats	-	-	7	4	0
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**N. B. One course after breaking up,
From Swinton to Craik-hill around the latter place.**

Soil. Gravel.

Rent, 13 s. (10 s. and 16 s.)

Product.	Wheat	-	-	2	4	0
	Barley	-	-	3	4	0
	Oats	-	-	3	6	0

Around Slenningford.

Soil. A shallow loam on lime-stone.

Rent, 8 s,

Product.

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Product.	Wheat	-	-	1	7	0
	Barley	-	-	2	4	0
	Oats	-	-	3	0	0

Mr. Dalton's husbandry.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	3	4	0

Around Danby.

Soil. Gravelly, clay, and loam.

Rent, 12s. 6d.

Product.	Wheat	-	-	2	6	2
	Barley	-	-	4	0	0
	Oats	-	-	4	3	0
	Rye	-	-	5	5	0

Mr. Scroop's husbandry at Danby.

Soil and rent, as above.

Product.	Wheat	-	-	3	6	0
	Barley	-	-	5	0	0
	Oats	-	-	6	2	0
	Rye	-	-	5	5	0

Mr. Scroop's moor improvements at Dalton.

Soil. Black peat moor, and some light loam.

Rent, 0 0 0

Product.	Maclin	-	-	3	0	0
	Oats	-	-	5	0	0

From

From *Danby* to *Asgarth*, around the latter.

Soil. Good loam and gravel,

Rent, 20 s.

Around *Raby-Castle*.

Soil. Gravel, or rich loam,

Rent, 16 s.

Product.	Wheat	-	-	3	1	0
	Barley	-	-	4	3	0
	Oats	-	-	5	0	0
	Rye	-	-	5	0	0

Lord *Darlington's* husbandry.

Soil and rent, the same.

Product.	Wheat	-	-	4	1	0
	Barley	-	-	5	5	0
	Oats	-	-	5	5	0

From *Raby* to *Durham*.

Rent, 21 s. 6 d.

Around *Newcastle*.

Rent, 3 l. 10 s.

From *Newcastle* to *Morpeth*, about *Gosworth*.

Soil. Loam, sandy,

Rent, 20 s.

Product.	Wheat	-	-	2	0	2
	Barley	-	-	3	6	0
	Oats	-	-	3	6	0
	Rye	-	-	3	6	0

About

About *Morpeth*.

Soil. Loamy clay.

Rent, 12s.

Product.	Wheat	- -	1	6	0
	Barley	- -	2	4	0
	Oats	- -	3	6	0

From *Morpeth* to *Alnwick*.

Rent, 12s.

Product.	Wheat	- -	2	4	0
	Barley	- -	3	6	0
	Oats	- -	4	4	0

About *Alnwick*.

Soil. Light loam and gravel.

Rent, 15s.

Product.	Wheat	- -	2	4	0
	Barley	- -	5	0	0
	Oats	- -	5	0	0
	Rye	- -	2	4	0

From *Alnwick* to *Belford*.

Rent, 12s.

Product.	Wheat	- -	2	4	0
	Barley	- -	4	4	0
	Oats	- -	4	4	0

Around *Belford*.

Soil. Clayey loam.

Rent, 15s.

Product.	Wheat	- -	2	5	0
	Barley	- -	5	0	0
	Oats	- -	6	0	0

About

About *Waren.*

Soil. Black moory land.

Rent, 1 s. 6 d.

Product. Oats - - - 3 0 0

About *Hetton.*

Soil. Light loams, and black moory land.

Rent, 6 s. 6 d.

Product. Wheat - - - 1 2 0

Barley - - - 3 0 0

Oats - - - 3 6 0

From *Belford* to *Berwick.*

Rent, 12 s.

Product. Wheat - - - 3 0 0

Barley - - - 4 4 0

Oats - - - 4 4 0

From *Berwick* to *Wooller.*

Rent, 9 s.

About *Fenton.*

Soil. Sandy loams.

Rent, 8 s.

Product. Wheat - - - 3 0 0

Barley - - - 3 4 0

Oats - - - 5 0 0

Rye - - - 3 6 0

From *Wooller* to *Rothbury.*

— *Alnwick* to ditto. } Moors.

About .

About Rothbury.

Soil. Gravel, clay, sand, moory.

Rent. Open, 1s. 9d. Inclosed, 20s.

Average, 10s. 10d.

Product.	Wheat	-	-	2	2	0
	Barley	-	-	3	0	0
	Oats	-	-	6	2	0
	Rye	-	-	2	4	0

From Rothbury to Wollington, about
Cambo.

Soil. Clay, and moory.

Rent, 15s.

Product.	Wheat	-	-	3	0	0
	Barley	-	-	4	3	0
	Oats	-	-	6	2	0
	Rye	-	-	2	2	0

Wollington to Cholofoford-bridge.

Rent, 15s.

From Cholofoford-bridge to Glenwelt; all
moors.

About Glenwelt.

Soil. Sand, gravel, and clay.

Rent, 12s. 6d.

Product.	Wheat	-	-	3	6	0
	Barley	-	-	4	0	0
	Oats	-	-	11	2	0
	Rye	-	-	4	3	0

From *Glenwelt* to *Brampton*, chiefly moors; rent of inclosures, 17s. 6d.

A few miles south of *Carlisle*, about *High Ascot*.

Soil. Light loam, gravel, and clay.

Rent, 15s.

Product.	Wheat	-	-	2	4	0
	Barley	-	-	2	4	0
	Oats	-	-	6	2	0

About *Penrith*.

Soil. Clay, sand, gravel, loam.

Rent. Open, 3s. Inclosed, 15s.

Average, 9s.

Product.	Wheat	-	-	3	0	0
	Barley	-	-	3	1	0
	Oats	-	-	3	4	0
	Rye	-	-	3	0	0

Penrith to *Keswick*; many moors; about the latter.

Soil. Hazel mold, gravel, and moory.

Rent. Inclosed, 25s.

Product.	Wheat	-	-	4	5	2
	Barley	-	-	5	0	0
	Oats	-	-	6	2	0

From *Penrith* to *Kendal*, about *Shapp*.

Soil. Loam, on a lime-stone.

Rent. Open, 2s. 6d. Inclosed, 20s.

Average,

Average, 11s. 3d.

Product. Barley - - 2 4 0
Oats - - 4 3 0

From Kendal to Burton, about Holme.

Soil. Light loam, on lime-stone.

Rent, 21s.

Product. Wheat - - 1 5 2
Barley - - 2 4 0
Oats - - 3 0 0
Rye - - 1 5 2

From Lancaster to Garstang, about Kabers.

Soil. Clay, light loam, and sand.

Rent, 17s.

Product. Wheat - - 3 2 0
Barley - - 3 6 0
Oats - - 5 0 0
Rye - - 4 0 0

Around Garstang.

Soil. Clay, light loam.

Rent, 17s.

Product. Wheat - - 4 3 0
Barley - - 3 6 0
Oats - - 5 5 0

From Garstang to Preston and Wigan.

Rent, 25s.

From Wigan to Warrington.

Rent, 30s.

From *Warrington* to *Prescot*, about
Bowles.

Soil. Clay, and rich loam.

Rent, 17 s. 6 d.

Product.	Wheat	-	-	2	0	0
	Oats	-	-	3	1	0

From *Leverpool* to *Ormskirk*, about
Halfal.

Soil. Sandy loam.

Rent, 15 s.

Product.	Wheat	-	-	3	6	0
	Barley	-	-	2	4	0
	Oats	-	-	2	4	0

From *Warrington* to *Altringham*.

Soil. Loam and sand.

Rent, 17 s. 6 d.

About *Altringham*.

Soil. Sand ; some clay.

Rent, 20 s.

Product.	Wheat	-	-	3	6	0
	Barley	-	-	4	1	0
	Oats	-	-	5	5	0

At *Worsley*

Rent, 2 l.

From *Dunham* to *Knotsford*.

Rent, 27 s. 6 d.

About *Knotsford*.

Soil. Clay and sand.

Rent,

Rent, 16 s.

Product. Barley - 5 0 0

From *Knotsford* to *Holmes Chapel*, about the latter.

Soil. Sand and clay.

Rent, 20 s.

Product. Wheat - 2 4 0

Barley - 3 6 0

Oats - 3 6 0

From *Newcastle-under-line* to *Stone*.

Soil. Sandy loam.

Rent, 16 s.

Product. Wheat - 2 6 0

Barley - 3 6 0

Oats - 5 0 0

About *Rudgeley-bridge*.

Soil. Clay, sandy gravel, and loam.

Rent, 17 s.

From *Rudgeley-bridge* to *Litchfield*.

Rent, 25 s.

About *Sbenstone*.

Soil. Sand and gravel.

Rent, 15 s.

Product. Wheat - 3 1 0

Barley - 5 0 0

Oats - 5 5 0

Rye - 3 6 0

F 3 From

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From *Litchfield* to *Birmingham*, about
Aston.

Soil. Sandy.

Rent, 17s. 6d.

Product.	Wheat	-	3	0	0
	Barley	-	3	1	0
	Oats	-	4	0	0

From *Birmingham* to *Hales-Owen*.

Rent, 12s.

About *Hagley*.

Soil. Light loam, sand, and clay.

Rent, 20s.

Product.	Wheat	-	3	4	0
	Barley	-	4	3	0
	Oats	-	4	4	0
	Rye	-	2	4	0

Around *Broomsgrove*.

Soil. Sand and clay.

Rent, 30s.

Product.	Wheat	-	4	5	2
	Barley	-	5	2	2
	Oats	-	6	2	0

From *Broomsgrove* to *Worcester*, four
miles short of the latter.

Rent, 27s. 6d.

From *Worcester* to *Evesham*, about
Perfshore.

Soil. Clay or loam.

Rent,

Rent. Open, 10s. Inclosed, 17s.
6d. Average, 13s. 9d.

Product. Wheat - - 3 1 0
Barley - - 3 0 0

About *Bendsworth* and *Evesham*.

Soil. Clay.

Rent, 21s.

Product. Wheat - - 4 0 0
Rye - - 4 0 0
Barley - - 6 0 0
Oats - - 8 0 0

From *Evesham* to *Oxford*, about *Moreton*.

Soil. Gravel.

Rent, 20s.

Product. Wheat - - 3 4 0
Barley - - 5 0 0
Oats - - 5 0 0

About *Chipping Norton*.

Rent, 6s. 6d.

About *Enstone*.

Rent, 11s.

From *Oxford* to *Henley*, around *Bensington*.

Soil. Gravel, sand, and clay.

Rent. Open, 13s. Inclosed, 30s.

Average, 21s. 6d.

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Product.	Wheat	-	3	4	0
	Barley	-	4	0	0
	Oats	-	6	4	0

Around *Henley*.

Soil. Gravelly chalk, light loam, and clay.

Rent, 17 s.

Product.	Wheat	-	3	0	0
	Barley	-	3	0	0
	Oats	-	3	0	0

From *Henley* to *Maidenhead*.

Rent, 13 s. 9 d.

About *Maidenhead*.

Soil. Clay, or good loam.

Rent, 20 s.

Product.	Wheat	-	3	4	0
	Barley	-	4	0	0
	Oats	-	5	0	0

From *Maidenhead* to *London*, about *Colnbrook*.

Rent, 20 s.

Around *Harmondsworth*.

Soil. Gravel and loam.

Rent, 20 s.

Product.	Wheat	-	2	4	0
	Barley	-	4	0	0

At

At *Hammer Smith.*

Rent. Nursery and garden land, 3*l.*

About *Kensington.*

Soil. Clay, sand, and gravel.

Rent, 2*l.*

Product.	Wheat	-	-	6	0	0
	Barley	-	-	8	0	0

From *London* to *Barnet.*

Rent, 2*l.* 17*s.* 6*d.*

From *Barnet* to *North Mims.*

Rent, 16*s.*

About *North Mims.*

Soil. Pebbly gravel, and clay.

Rent, 12*s.*

Product.	Wheat	-	-	2	4	0
	Barley	-	-	3	0	0
	Oats	-	-	4	0	0

Having thus inserted the variety of soils, rent, and products; it is in the next place necessary to throw them into averages, that the proportion between each may be seen, from whence we shall at once know whether rent bears a due proportion to product; and if it does not, conjecture the reason. The utility of such a complete view must be obvious at the very first mention.

Rents

Rents under 5s. per acre.

		Bushels.				
Countries*.	Rent.	Wh.	Bar.	Oats.	Rye.	Aver.
Stevenage to } Luton, }	5s.	15	24	20		19
Tbrapston to } Oundle, }	5	24	32			28
Stamford to } Grimsthorp, }	4	16	16	20		26
Average,		18	27	17		
Ganton on Wolds	1		9	12		10
Swinton Moor- } side, }	4			16		
Waren Moors,	1s. 6d.			12		

Average rent of these, — £. 9 3 9

Ditto product, twenty bushels.

Rent something better than 2 d. per bushel.

* These are not calculated for a line of country ; but I say from such a place to such a place, as more distinguishing than naming a village.

† The Swinton Moors only one crop in a course ; and the Waren ones yielding only oats, I reject them from the averages, as they would evidently injure the truth.

Rents

Rents from 5s. to 10s. per acre.

Bushels.

Countries.	Rent.	Wh.	Bar.	Oats.	Rye.	Aver.
Around Ste- venage, }	9s.	23	36	36		31
Wooburn to Newport Pagnel, }	9s. 3d.	24	24	24		24
Newport to Bedford— Biddenham, }	7	22	24	24		23
Colsterworth to Grantbam, }	10	28	28	32		29
Grantbam to Newark, }	10	27	27			27
Doncaster to Rotherham, Coneybro', }	9	20	32	32		28
Leeds to Tad- caster, }	8s. 6d.	19	32	44		31
York to Barn- by-moor, }	10	30	35	55	25	36
Risby,	9s. 3d.	22	37	38		32
Stillingfleet,	10	24	24	32	24	26
Thorne,	10	24	36	48		36
Wentworth- house, }	8	27	40	40	24	32

Driffeld,

Countries.	Rent.	Bushels.				
		Wh.	Bar.	Oats.	Rye.	Aver.
<i>Driffeld,</i>	10	24	28	16		22
<i>Yeddingham- bridge,</i>	6s. 6d.	28	40	40	28	34
<i>Nunnington,</i>	5 10	16	24	30	28	24
<i>Kirkleatham, Mr. Turner's farm,</i>	8 4	20	34	44		32
<i>Schorton,</i>	10	20	32	40	25	29
<i>Slensingford,</i>	8	15	20	24		19
<i>Mr. Dalton's husbandry,</i>	8	20	28			24
<i>At Hetton, in Northumber- land,</i>	6 6	10	24	30		21
<i>Fenton,</i>	8	24	28	40	30	30
<i>Penrith, ditto,</i>	9	24	25	28	24	25
<i>Averages,</i>		22	30	34	26	

Average rent of these, 8s. 6d.

Ditto product 28 bushels.

Rent about $3\frac{1}{2}d.$ per bushel.

Rents

Rents from 10s. to 15s. per acre.

Countries.	Rent.	Bushels.				Aver.
		Wh.	Bar.	Oats.	Rye.	
<i>Hatfield to Welwyn,</i> }	12s.	25	32	32		29
<i>Dunstable to Wooburn,</i> }	14	15	23	24		20
<i>Ditto,</i>	13 9d.	20	24	32		25
<i>St. Neot's to Kimbolton,</i> }	12	15	24	16		18
<i>Near Stamford,</i>	13	20	32	40		30
<i>Newark to Tuxford,</i> }	15		32	32		32
<i>West Drayton,</i>	11		36	40		38
<i>Woolley,</i>	12 6	22	28	40		30
<i>York to Barnby-moor,</i> }	12 6	17	15	32	20	21
<i>Howden,</i>	15	24	32	40	24	30
<i>Near Scarbro' Brumpton,</i> }	14	20	32	24		25
<i>East Newton,</i>	12	24	28	32	20	26
<i>Around Kirk-leatham,</i> }	13	25	40	40		35
<i>Gilsdale,</i>	10 6	20		40	27	29
<i>Rookby,</i>	12	16	25	32	28	25
<i>Kiplin,</i>	12 6	21	32	30		27

Me.

Bushels.

Countries.	Rent.	Wh.	Bar.	Oats.	Rye.	Aver.
Mr. Crowe's husbandry, }	12s. 6d.	32	56			44
<i>Craikbill,</i>	13	20	28	30		26
<i>Danby,</i>	12 6	22	32	35	45	31
Mr. Scroope's husbandry, }	12 6	30	40	50	45	41
<i>Morpeth,</i>	12	14	20	30		21
<i>Morpeth to Alnwick,</i> }	12	20	30	36		28
<i>About Alnwick,</i>	15	20	40	40	20	30
<i>Alnwick to Belford,</i> }	12	20	36	36		30
<i>Around Belford,</i>	15	21	40	48		36
<i>Belford to Berwick,</i> }	12	24	36	36		32
<i>Rothbury,</i>	10 10	18	24	50	20	28
<i>Rothbury to Wollington,</i> }	15	24	35	50	18	31
<i>Glenwelt,</i>	12 6	30	32	90	35	46
<i>South of Carlisle,</i> }	15	20	20	50		30
<i>Penrith to Kendal, Shapp,</i> }	11 3		20	35		27
<i>Ormskirk,</i>	15	30	20	20		23

Rudgeley-

Countries.	Rent.	Bushels.				
		Wh.	Bar.	Oats.	Rye.	Aver.
Rudgeley- bridge to Litchfield,	15s.	25	40	45	30	35
Worcester to Evesham,	13 9	25	24			24½
North-Mims,	12	20	24	32		25
Averages,	— —	22	30	37	27	—

The average rent of these, 13s.

Ditto product 29 bushels.

Rent near 4½d. per bushel.

Rents from 15 s. to 20 s. per acre.

Wooburn to Newport Pagnel,	20s.	25	40	36		33
Kimbolton to Thrapston,	17	22	24	20		22
Sheffield to Barnsley,	17	20	32	32	30	28
Holdernefs,	17 6	32	40	40		37
Swinton,	16 6	20	20	24	20	21
Raby-castle,	16	25	35	40	40	35
Lord Darling- ton's husban- dry,	16	33	45	45		41

Newcastle

Bushels.

Countries.	Rent.	Wh.	Bar.	Oats.	Rye.	Aver.
Newcastle to Morpeth, }	20s.	16	30	30	30	26
Lancaster to Garstang, }	17	26	30	40	32	32
About Gar- stang, }	17	35	30	45		36
Warrington to Prescot, }	17s. 6d.	16		25		20
Altringham,	20	30	33	45		36
Holmes-chapel,	20	20	30	30		26
Newcastle to Stone, }	16	22	30	40		30
Litchfield to Birmingham, }	17 6	24	25	32		27
Hagley,	20	28	35	36	20	29
Moreton,	20	28	40	40		36
Henley,	17	24	24	24		24
Maidenhead,	20	28	32	40		33
Harmond- sworth, }	20	20	32			26
Averages,		24	32	35	28	

The average rent of these, 18 s.

Ditto product, twenty-nine bushels.

Rent, $7\frac{1}{2}$ d. per bushel.

Rents,

Rents from 20s. to 25s. per acre.

Countries.	Rent.	Bushels.				
		Wh.	Bar.	Oats.	Rye.	Aver.
<i>Metbley to Temple Newsham,</i>	25s.	35	40			37
<i>Richmond to Gilling,</i>	21	25	45	45	40	38
<i>Kestwick,</i>	25	37	40	50		42
<i>Kendal to Burton,</i>	21	15	20	24	33	18
<i>Bendsworth,</i>	21	32	48	64	32	44
<i>Bensington,</i>	21s. 6d.	28	32	52		37
<i>Averages,</i>		28	37	47	28	

The average rent of these, *1l. 2s. 6d.*

Ditto product thirty-six bushels.

Rent, *7½d. per bushel.*

Rents from 25s. upwards.

<i>Bromsgrove,</i>	30	37	42	50		42
<i>Kensington,</i>	40	48	64			56
<i>Averages,</i>		42	53			

Average rent of these, *1l. 15s. 0d.*

Ditto product forty-nine bushels.

Rent, *8½d. per bushel.*

Recapitulation.

Rate.	Rent.	Crop.	Price.
Under 5s. <i>per</i> acre,	0 3s 9d	20	2d.
5s. to 10s.	0 8 6	28	3½
10s. to 15s.	0 13 0	29	4½
15s. to 20s.	0 18 0	29	7½
20s. to 25s.	1 2 6	36	7½
25s. upwards,	1 15 0	49	8½

It would have been impossible to throw these averages into proportions respecting the value of the products *per* measure; for land varies so much in the quality of its productions that the attempt would end in nothing but confusion. In some of these articles are very great crops, which, in point of value, are not more than equal to those of middling ones, which is particularly the case with oats; but such variations must inevitably be numerous; indeed the variety of them may possibly throw them upon a par.

On this little table it is in the first place to be remarked, that the rise of the rent *per* bushel with the rent of the land is striking, and must flow from the low rents being very favourable: It does not arise from

from their producing ordinary sorts of corn only, which yield many bushels of but small value, for the *number* of bushels, *viz.* twenty, is the lowest in the table as well as the rent. Nor can it be attributed to the lowness of rent being a consideration either of the landlord or the tenant, on account of manuring; any extraordinary expence of which sort is, in fact, rent, though not paid to the landlord; and this also appears from the smallness of the product in quantity; that would contradict, and be out of proportion to the rent if the lands were richly manured.

It will certainly be said, that if the lowness of the rent arose from favour, the products would be greater: It is very difficult to answer this; nor is this the proper place for it; but I shall hereafter attempt to shew, that low rents, in many, very many cases, are prejudicial to the culture of the earth; consequently it is no contradiction to suppose the low rents in question to be those of favour, or at least under their value, which circumstance does not cause a disproportioned rise in quantity of product, as we see in the table, but only lowers the price of it to the farmer.

But there are disproportions in this table that require speaking to; 3 s. 9 d. rent gives crops of twenty bushels; 8 s. 6 d. is more than double this, and yet the crop is only twenty-eight bushels, which is little more than the rise of a third, instead of more than half. Again, from 5 s. to 10 s. rent, from 10 s. to 15 s. and from 15 s. to 20 s. vary only one bushel in their average product: This is very extraordinary. I concluded from it, that there must be strong variations in the averages of the grains respectively; that the higher rented lands must be much superior to the lower in wheat, though inferior in other grains; this induced me to cast up the averages of each, and the result surprized me, for the proportions are not at all in favour of the larger rents. These foils, I conclude, are, upon an average, not very different, and that the variations in the rent arise from other circumstances; and the farmers that pay the higher ones, are re-imburfed in other crops than grain, in a greater proportion than those who have their lands so much cheaper; for we may be certain high rents are re-imburfed in something.

How-

However, this idea of inequality must not be carried too far: We certainly are not to expect that the average product is to be doubled with the rent, that would be to contradict all common facts. The rise of eight bushels to the difference between 3*s.* 9*d.* and 8*s.* 6*d.* is considerable; for we should consider, that the acre which yields but twenty, costs the farmer in every thing, but rent, as much, or very near as much, as that which produces twenty-eight bushels; a circumstance of vast consequence. And the superiority of this eight bushels must be considered as an index to all the other articles of product, which may be supposed equally superior.

Indeed, the succeeding superiorities of one bushel are not answerable to those of rent. But seeming contradictions of this sort must be expected in enquiries that depend on such variety of circumstances.

The equality of rent *per* bushel, between 18*s.* an acre and 22*s.* 6*d.* is very remarkable.

The rise of seven bushels product, from 18*s.* to 22*s.* 6*d.* is considerable, and that from 22*s.* 6*d.* to 25*s.* &c. the same; and it proves strongly that cultivation may be

carried very high. Upon the whole, there is more correspondence between the rent and the product than I expected.

Average Products.

General average product of wheat throughout the tour, three quarters *per* acre.

Of barley four quarters.

Of oats four quarters and a half.

Of rye three quarters three bushels.

These products are greater then I apprehended before I calculated them; but by no means large enough to authorize any one to calculate the average of the whole kingdom at so high quantities as of wheat four quarters, besides 4 s. an acre of sheep feed, barley five quarters, and oats as much, as the prejudiced Writer of the *Enquiry into the Prices of Wheat, Malt, &c.* page III. does.

Having thus endeavoured to state the comparison between rent and product, I shall, in the next place, enquire into the state of rent itself, not with an eye to any such proportions, but to gain the average of as large a part of the kingdom as I can, which is a point of much importance to political arithmetic.

From

From *North Mims*, through *Hatfield*, to *Welwyn*, the country is very good, and well cultivated; the average rent 12s. It continues also rich towards *Stevenage*; but at that place letts for no more than 9s. From *Stevenage* to *Luton* is worse; about *Offley* it is only 5s. but that is under the average of these nine miles; I shall call it 7s. From *Luton* to *Dunstable* the soil is not bad, nor the culture very much so; 9s. an acre is not far from the average rent. From *Dunstable* to *Wooburn* two minutes were taken, 14s. and 13s. 9s. but as there are some tracks very sandy, I shall call it 13s. From *Wooburn* to *Newport Pagnel* two minutes, 9s. 3d. and 20s. suppose the average 15s. From thence to *Bedford* a strong clay, great quantities of beans, rent of one minute 7s. but the average of the line is certainly 10s. From thence to *St. Neot's*, by *Northill* and *Sandy*, much good land, besides the rich gardens at the latter place, which are considerable; rent 12s. From thence to *Kimbolton*, 12s. To *Thrapston*, the minute 17s. but as it is generally open, I shall call it but 10s.

Here I shall make a pause, for thus far the tour has been through a country that

does not vary much in rent; it is a line of 109 miles, in which I have much reason to believe the general average rent very near the average of the preceding sums, which is 10 s.

From *Thrapston* to *Stamford*, by *Oundle*, is in general un-inclosed; at *Byten*, clay for 5 s. and the average, I apprehend, not more than 7 s.

From *Stamford* to *Grimsthorpe*, at *Caster-ton* 13 s. but that being the average of open and inclosed, is above the general mark. At *Little Byten* 4 s. Most of this country is open and poor; I shall call it but 5 s. It is something better from *Grimsthorpe* to *Colsterworth*; but I should not apprehend more than 6 s.

From *Colsterworth* to *Grantham* it improves much, and is inclosed chiefly on one side the road. At *Paonton* 10 s.

From *Grantham* to *Newark* all open, but much good land. At *Fossen* 10 s. To *Belvoir-Castle* inclosed, I reckon 9 s. From *Newark* to *Bawtry* mostly inclosed; two minutes 15 s. and 11 s. I calculate the average at 13 s. But *Shirewood-Forest* is all open, and very sandy; the adjoining farms are lower; suppose the whole at 12 s.

From

From *Bawtry* to *Doncaster* is a continued track of driving sand; I found, by enquiry, that rents were *very low*; the average of the whole cannot be more than 5 s.

Here it is necessary to make another stop; for as we next enter a very populous manufacturing part of the *West-Riding*, rents may probably be affected. This line of country extends 107 miles, and the average rent is 8 s.

From *Doncaster* to *Rotherham*, much very good, and some bad; at *Coneysborough* so low as 9 s. But vast tracks about *Rotherham*, from 20 s. to 40 s. and the numerous meadows upon the many rivers heighten the rent much, I shall call this track 18 s. From *Rotherham* to *Sheffield* much stony soil that is bad, and grass that letts high; I calculate the average, as it is all a vale, and taking the neighbourhood of *Sheffield* into the account, at 25 s. From *Sheffield* to *Barnsley* two minutes, 17 s. and 12 s. 6 d. the country is in general pretty rich, the average 14 s. From *Barnsley* to *Leeds* it is various, much of it continues stoney; I calculate the average at 12 s.

From *Leeds* to *Tadcaster*, about *Kiddel*, 8 s. 6 d. average I suppose 10 s.

Having

Having now run through the manufacturing country, we must cast up our account again. This line is sixty-seven miles, and the average rent 15 s. 6 d.

A part of the tour within this, is the following track: A line of ten miles, crossing *Wentworth-House* towards *Doncaster*, the average rent 10 s. From *Doncaster* to *Pontefract* 13 s. 6 d. From *Pontefract* to *Temple Newsham* 25 s. From *Temple Newsham*, by *Byrom*, to *Ferry-bridge*, 20 s. This is a rich line of fifty-one miles, the average rent 17 s.

Average of both 16 s. 6 d.

From *Tadcaster* to *York* I shall call 10 s.

From *York* to *Stillingfleet* 10 s.

From *York* to *Barnby-moor* three minutes, 10 s. 12 s. 6 d. and 13 s. 9 d. As there are some open lands, I shall call the average but 9 s. From *Barnby-Moor* to *Beverley*, large tracks of open poor land, and not many rich ones to compensate: This track of country I do not imagine lets, on an average, at more than 7 s. an acre.

From *Beverley* to *Hull*, about *Risby*, 6 s. 6 d. open and 12 s. inclosed; and as much of this country is open, the rent would not be above 9 s. were it not for the low

low lands towards *Hull*, which are rich : call it therefore 12s. In *Holdernefs* 17s. 6d. the minutes ; but as the cars let from 6s. to 10s. we must not call the average more than 15s. From *Beverley* to *Thorne*, to and through the *Caves*, is much open and poor land ; about *Howden* is a tract of good clay, and some also at *Thorne* ; rent of these 15s. but the whole line does not, I apprehend, exceed 10s.

From *Beverley* to *Driffild*, about the latter 10s. but it is chiefly open wolds : the average I calculate at 6s. From *Driffild* to *Burlington* 4s. 9d. From thence to *Honnanby* wolds 2s. 2d. about the latter place 4s. 3d. The average I reckon 3s. Around *Ganton*, a tract twenty miles by fifteen, the wolds 1s. From *Scarborough* to *Malton*, about *Brumpton*, 14s. Another minute 6s. 6d. and a third 13s. The average rent of this track I calculate at 10s. From *Malton*, by *Castle Howard*, to *Newton* and *Nunnington*, 12s. and 5s. 10d. Average, as it is mostly good, 10s. From *Newton*, across *Black Hambleton*, into *Cleveland* ; through Mr. *Duncomb's* estate, the soil is tolerably good, but so extremely underlet, that I apprehend it will not raise
the

the average greatly; the inclosures upon *Hambleton* are at 5s. Upon a par the cultivated land in this track does not rise higher than 6s. The moors let for nothing, and are the greatest part of the country.

Here we must make another pause, for we next enter a very different country. The various tracks we have passed are a line of 237 miles, and the average rent is 8s. But in it are several very large spaces of uncultivated land, such as bogs and marshes, by *Tborne*, &c. moors on *Hambleton*, &c. I apprehend if these were proportionably reckoned, the average rent would not be more than 6s.

From the descent into *Cleveland*, to *Kirkleatham*, 13s. From *Kirkleatham* to *Schorton* and *Richmond*, through *Cleveland*, 17s. 6d. towards *Schorton* 12s. 6d. From ditto to *Richmond* 10s. The average I calculate at 12s.

From *Richmond* to *Greta Bridge*, two minutes, 20s. and 12s. The average, I apprehend, as the first lasts but a few miles out of *Richmond*, 14s. (N. B. Some commons uninclosed, not reckoned.) From *Richmond* to *Kiplin* 12s. 6d. From *Kiplin* to *Swinton*, about the latter, 16s. 6d. but the

the average not more, I apprehend, than 14s. From *Swinton* to *Craikbill* 13s. From *Craikbill* to *Sleningford*, about the latter, 9s. but as the extent is not great, we must call it 10s. From *Sleningford* to *Danby* is through the neighbourhood of *Swinton*, it must not therefore be reckoned, as the country would otherwise be charged twice. From half way between *Swinton* and *Danby* to *Asgarth*, two minutes, 12s. 6d. and 20s. but as there is much moor side land (and, by the way, many moors themselves) I shall not call the average more than 11s. From *Richmond* to *Croft Bridge* I calculate at 12s.

Thus far is a line of country which may very properly be thrown together; it extends 139 miles, and the average rent is 12s. 6d.*

From *Greta-bridge* to *Brough*, a continued moor. From *Bows* to the fall of *Tees*, a vast quantity of moors, but many tracks of grass about the villages, and fine

* It is proper to remark, that in calculating these averages, I reckon them according to distance; so that a proportion may hold between the rents, when twenty miles are at 10s. for instance, and fifteen at 6s. 6d. Perfect exactness must not be expected, but I am not far from the mark,

meadows spread over the vales, along the rivers, of an high rent, 20 s. an acre and upwards.

From *Brough* to *Askrig*, mountains and moors.

To *Reeth* and *Richmond*, chiefly ditto, some spots of inclosed grass, and fine vales, that let at 30 s. but they bear no proportion to the waste land.

This is a track of as wild country as any in *England*, continued mountainous moors, the upper parts of which do not yield the landlords a penny an acre rent; but the vales, as I have already observed, are good grass. The extent of this line is eighty-three miles. As to the rent I know not how to calculate it: I do not apprehend that above one acre in fifty is cultivated; if we reckon the rent, at an average, at 9 d. per acre, it is as much as it amounts to.

From *Croft-bridge* to *Darlington* and *Raby-castle*, 16 s. From *Raby* to *Durham*, 21 s. 6 d. From *Durham* to *Newcastle*, minuted as letting very high; considering the neighbourhood of those places, we cannot estimate it at less than 26 s.

This

This line extends across the county of *Durham*, the distance fifty miles; and the average rent a guinea *per* acre.

From *Newcastle* to *Morpeth*, two minutes, 20 s. and 12 s. Average I calculate at 15 s. From *Morpeth* to *Alnwick*, 12 s. From *Alnwick* to *Belford*, 12 s. From *Belford* to *Berwick*, 12 s.

This line extends through the cultivated part of *Northumberland* sixty-six miles; the average rent, 12 s. 6 d.

From *Berwick* to *Wooller*, 9 s. From *Wooller*, and from *Alnwick* to *Rothbury moors*, vales included, the rent is not above 2 s. From *Rothbury* to *Cambo*, mostly moors; but as the inclosures around both those places, for a few miles, let at from 10 s. to 15 s. an acre, we may calculate the average rent of this track at 6 s.

From *Cambo* to *Choloford-bridge*, 15 s.

From *Choloford-bridge* to *Glenweit* all moors. The moor side farms about both places will not raise this track to above 6 d. *per* acre.

Here ends the line through the uncultivated part of *Northumberland*. It extends eighty-eight miles, and the average rent is 5 s. The general average of the two lines through

through *Northumberland*, of one hundred fifty four miles, is about 7 s. 9 d. But I should here remark, that much the greatest part of *Northumberland* lies to the westward of the cultivated line, and most of it is a chain of mountains and moors: If I was, from the preceding view, to give a random guess of the rent of the whole county, I should suppose it from 4 s. 6 d. to 5 s. per acre.

From *Glenwelt* to *Carlisle*, by *Brampton*, chiefly moors; the inclosures, 17 s. 6 d. I calculate the average at 8 s.

From *Carlisle* to *Penrith*, two minutes 15 s. each; about *Penrith*, 9 s. The average I reckon at 12 s.

From *Penrith* to *Keswick*, chiefly moors; the moor side farms, and the meadows in the vales do not raise this track to more than 1 s. 6 d.

From *Penrith* to *Kendal*, above half is wild mountainous moors, and open cultivated lands, do not lett for more than 2 s. 6 d. the inclosures and meadows in the vales rise to 20 s. The general average is not above 4 s.

From *Kendal* to *Burton*, about *Holme*, 21 s. but the average of the line not more than 15 s.

Here

Here it is proper to pause, that we may discover the average of the two counties of *Cumberland* and *Westmoreland*. The extent of the tour through them is ninety miles, and the average rent 7s. 6d.

From *Burton* to *Lancaster* 15s. From *Lancaster* to *Preston* two minutes, 17s. each, and another 25s. The average I calculate at 21s.

From *Preston* to *Wigan* 25s. From *Wigan* to *Warrington* 30s. From *Warrington* to *Liverpool* one minute 17s. 6d. the average I calculate, including the neighbourhood of that port, at 27s. From *Liverpool* to *Ormskirk* 16s. From *Warrington* to *Altringham* 18s. From *Altringham* to *Manchester* I calculate, considering that neighbourhood, at 25s.

This line of country extends through the populous county of *Lancaster*, which is extraordinarily full of towns and manufactures. The distance is an hundred and twenty three miles; and the average rent 22s. 0d.

From *Dunholm* to *Knotsford*, 27s. 6d. From *Knotsford* to *Holmes Chapel*, about the latter, 20s. The average I calculate at 16s. From *Holmes Chapel* to *Newcas-*

ele-under-Line I calculate at 16s. From thence to *Stone* 16s. From *Stone* to *Rudgeley-bridge* 17s. From *Rudgeley-bridge* to *Litchfield* 25s. From *Litchfield* to *Birmingham* one minute 17s. 6d. but I calculate it at 20s. From *Birmingham* to *Hales Owen* 12s. From thence to *Bromsgrove*, about *Hagley*, 20s. another minute 30s. The average I calculate at 1*l.* 1s. From *Bromsgrove* to *Worcester* I reckon also a guinea. From *Worcester* to *Evesham*, about *Pershore*, 13s. 9d. towards *Bendsworth* 21s. The average I calculate at 17s. From *Evesham* to *Moreton* 20s.

I shall here make another pause, before we get into the stoney parts of *Oxfordshire*. This line of country passes through several counties; it extends an hundred and thirty eight miles, and the average rent is 17s. 6d. per acre.

From *Moreton* to *Chipping-Norton*, 6s. 6d. From thence to *Oxford*, one minute 11s. but the average, I believe, does not exceed 10s.

From *Oxford* to *Henley*, the first minute 21s. 6d. the second 17s. but, as the first is the average of open and inclosed, with most of the former, I do not calculate the average

average of this track at more than 18 s.
 From *Henley* to *Maidenhead* 13 s. 9 d.
 From *Maidenhead* to *Hammersmith* 20 s.
 From thence, through *London*, to *Barnet*,
 2 l. 12 s. 6 d. From *Barnet* to *North*
Mims, 16 s.

This is a track of an hundred and three
 miles, and the average rent is 19 s. 6 d.

Recapitulation.

	Miles.	Rent.
From <i>North - Mims</i> to <i>Thrapston</i> ,	109	10 s.
From <i>Thrapston</i> to <i>Don-</i> <i>caster</i> ,	107	8 s.
From <i>Wentworth</i> and <i>Don-</i> <i>caster</i> to <i>Tadcaster</i> ,	118	16 s. 6 d.
From <i>Tadcaster</i> to the def- cent into <i>Cleveland</i> ,	237	8 s.
From the descent into <i>Cleveland</i> to <i>Croft Bridge</i> ,	139	12 s. 6 d.
From <i>Greta Bridge</i> to <i>Rich-</i> <i>mond</i> ,	83	0 s. 9 d.
From <i>Croft Bridge</i> to <i>New-</i> <i>castle</i> ,	50	21 s.
Through <i>Northumberland</i> , the cultivated and un- cultivated part,	154	7 s. 9 d.

	Miles.	Rent.
Through <i>Westmoreland</i> and <i>Cumberland</i> ,	90	7s. 6d.
Through <i>Lancashire</i> ,	123	22s. 6d.
From <i>Dunholm</i> in <i>Cheeshire</i> , to <i>Moreton</i> in <i>Oxford-</i> <i>shire</i> ,	138	17s. 6d.
From <i>Moreton</i> , through <i>London</i> , to <i>Mims</i> ,	103	19s. 6d.

I have calculated these numerous and complex proportions with as much exactness as I am able, and I find, from several trials, the general average to be 11s. 9d. per acre.

I am, &c.

LET-

L E T T E R XXVI.

I SHALL in the next place enquire into the product of pulse and roots; that is, chiefly pease, beans, and turneps; these are by no means to be overlooked, as their product will explain several points not to be discovered by knowing that of grain. I shall add as I proceed, the variations of culture, such as hoeing, &c. which are circumstances that ought never to be omitted. I shall not specify the soil, as it is minuted in the preceding letter.

Hatfield to Welwyn.

Rent, 12 s.

Q. B. P.

Product. Pease - - 2 4 0

Turneps; hoe once, 50 s.
per acre.

Around Stevenage.

Rent, 9 s.

Product. Pease - - 2 4 0

Beans, never hoe 2 4 0

Turneps, hoe once or twice,
2 l. 2 s.

H 3

Ste-

Stevenage to Luton ; at Offley.

Rent, 5s.

Product. Pease - - 1 6 2
Turneps ; hoe once ; value
2l. 7s. 6d.

Dunstable to Wooburn ; about Houghton.

Rent, 14s.

Product. Pease and beans
mixed - 4 0 0
Beans alone - 3 1 0
Never hoe.

About Milton.

Rent, 13s. 6d.

Product. Pease and beans
mixed - - 3 0 0

Wooburn to Newport Pagnel.

Rent, 9s. 3d.

Product. Pease and beans
mixed - 2 4 0
Beans ; feed the
weeds out with
sheep - - 3 0 0
Turneps they hoe twice ;
value 2l.

At Broughton.

Rent, 20s.

Product. Pease and beans 2 4 0
Beans ;

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Beans ; feed the
weeds with
sheep - 2 4 0

*Newport Pagnell to Bedford, at Bid-
denham.*

Rent, 7 s.

Product. Beans ; feed the
weeds out with
sheep - - 3 0 0

Pease - - 2 4 0

*From St. Neot's to Kimbolton, about
Hale Weston.*

Rent, 17 s.

Product. Pease - - 1 4 0

Beans, never hoe 1 7 0

Turneps ; hoe once ; value
35 s.

*From Kimbolton to Thrapston, about
Catworth.*

Rent, 17 s.

Product. Pease - - 2 0 0

From Thrapston to Oundle.

Rent, 5 s.

Product. Beans, never hoe 3 0 0
feed with sheep.

Near Stamford.

Rent, 13 s.

Product. Pease - - 2 4 0

H 4 Beans,

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Beans, never hoe 3 2 0
Turneps; hoe once; value
2 l. 2 s.

From Stamford to Grimsthorpe.

Rent, 4 s.

Product. Pease - - 2 0 0
Beans, never hoe 2 4 0

From Grimsthorpe to Caltsworth.

Rent, 10 s.

Product. Pease - - 4 0 0
Beans, never hoe 3 0 0
Turneps; hoe once; value
2 l.

Grantham to Newark.

Rent, 10 s.

Product. Beans, never hoe 2 4 0

Newark to Tuxford.

Rent, 15 s.

Product. Pease - - 3 0 0
Beans, never hoe 3 0 0
Turneps; hoe once or
twice; value 40 s.

At West Drayton.

Rent, 11 s.

Product. Pease - - 3 0 0
Beans, never hoe 2 4 0
Turneps; hoe once, 35 s.

From

From Bawtry to Doncaster.

Rent, low.

Product. Pease - - 1 6 0

Turneps; never hoe, 27s. 6d.

Doncaster to Rotherham; Coneyborough.

Rent, 9s.

Product. Beans - - 2 2 0

Turneps; hoe once or
twice; value, 30s.

Sheffield to Barnsley.

Rent, 17s.

Product. Pease - - 2 4 0

Beans, never hoe 3 6 0

Turneps; hoe once or
twice, 40s.

About Wooley.

Rent, 12s. 6d.

Product. Pease - - 1 7 0

Beans - - 2 2 0

Turneps; hoe once, 40s.

Leeds to Tadcaster.

Rent, 8s. 6d.

Product. Pease - - 1 6 0

Beans, never hoe 3 2 0

Turneps; hoe once; value
42s. 6d.

From York to Barnby Moor.

Rent, 10s.

Pro-

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Product. Pease - - 2 1 2
 Beans, never hoe 2 1 2
 Turneps; never hoed for
 the first time.

At Hutton.

Rent, 12s. 6d.

Product. Pease - - 1 2 0
 Beans, never hoe 3 0 0

Around Riffy.

Rent, 9s. 3d.

Product. Pease - - 2 1 0
 Beans, never hoe;
 get in open fields 3 4 0
 in inclosures 4 0 0
 Lentils - - 2 4 0
 Rape - - 4 0 0

At Stillingfleet.

Rent, 10s.

Product. Turneps; never hoe; va-
 lue, 27s.

Holdernefs.

Rent, 17s. 6d.

Product. Rape - - - 5 0 0

About Howden.

Rent, 15s.

Product. Beans, never hoe 2 4 0

Around Thorne.

Rent, 10s.

Product.

Product. Beans, never hoe 2 7 0
Turneps; never hoe, value 19s.

Rape - 3 4 0

The Marquis of Rockingham's *Kentish* farm.

Product. Beans in drills,
horse hoed - 5 0 0
Pease ditto - 4 0 0
Turneps; hand hoe twice.
Much finer crops than
common.

His Lordship's *Hertfordshire* farm.

Product. Beans in drills 2 4 0
Ditto hoed - 4 0 0
Pease - - 2 4 0
Turneps; hoed twice; value 36s.

Around *Wentworth-House*.

Rent, 8s.

Product. Beans; never hoe 2 2 0
Ditto Mr. Paine's,
drilled and horse
and hand hoed 3 6 0
Pease - - 3 0 0
Turneps; not hoed, value
20s.
Ditto hoed, 40s.

From

From Beverley to Driffeld.

Rent, 10s.

Product. Beans; never hoe 3 4 0

Pease - - 3 0 0

Turneps; once hoed, value
3 l.

*From Scarborough to Malton, about
Brumpton.*

Rent, 14s.

Product. Turneps; once hoed, 1 l. 1s.

At Yeddingham-bridge.

Rent, 6s. 6d.

Product. Beans; never hoe 3 0 0

Pease - - 1 7 0

Turneps; hoe once or twice,
value 22s. 6d.

About East Newton, &c.

Rent, 12s.

Product. Beans; never hoe 2 0 0

Pease - - 2 0 0

Turneps; they sometimes
hoe twice, value 40s.

Rape - - 5 0 0

About Nunnington.

Rent, 6s. 3d.

Product. Beans; never hoe 3 0 0

Pease - - 2 0 0

Mr. Turner at Kirkleatham.

Rent, 8s.

Turneps;

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Turneps; hoed 4/.

Rape - - - - 5 0 0

Around *Kirkleatham*.

Rent, 13 s.

Product. Pease and beans;

never hoe 3 6 0

Turneps; never hoe, value 3/.

Rape - - 5 0 0

At *Gilsdale*.

Rent, 11 s. 6 d.

Product. Turneps; never hoe, 50 s.

Rape - - 5 0 0

About *Schorton*.

Rent, 10 s.

Product. Beans; never hoe 2 4 0

Pease - - 2 0 0

Turneps; never hoe, value

3 l. 10 s.

Rape - - 3 1 0

Richmond to Greta-bridge, about *Gilling*.

Rent, 21 s.

Product. Beans; never hoe 3 1 0

Pease - - 2 0 0

Turneps; never hoed, value

3 l. 12 s. 6 d.

Rape - - 5 0 0

From *Greta-bridge* to *Bows*, about

Rookby,

Rent,

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Rent, 12 s.

Product. Pease - - - 2 1 0

Turneps; never hoe, value

3 l.

Around Kiplin.

Rent, 12 s. 6 d.

Product. Beans; never hoe 3 6 0

Pease - - - 2 4 0

Turneps; never hoe; value

4 l.

Rape - - - 4 0 0

Mr. Growe's husbandry.

Rent, 12 s. 6 d.

Product. Beans and pease 3 6 0

Pease - - - 4 0 0

Around Swinton.

Rent, 16 s. 6 d.

Product. Beans; never hoe 2 0 0

Pease - - - 2 0 0

Turneps; never hoe; the
value 50 s.

Rape - - - 4 0 0

The Moor-side farms.

Rent, 4 s. 6 d.

Product. Turneps; never hoe, value

40 s.

About Craik-hill.

Rent, 13 s.

Product.

Product. Pease - - - 3 6 0
Turneps; never hoed, value 3 *l.* 2 *s.* 6 *d.*

Around Slenningford.

Rent, 8 *s.*

Product. Pease - - - 1 4 0
Turneps; unhoed, 35 *s.*

Around Danby.

Rent, 12 *s.* 6 *d.*

Product. Beans; unhoed 2 6 2
Pease - - - 4 0 2
Turneps; unhoed, 45 *s.*
Rape - - - 5 5 0

Mr. Scroope's husbandry.

Rent, 12 *s.* 6 *d.*

Product. Beans; unhoed 3 7 0
Turneps; thrice
hoed - - - 4 10 0

Earl of Darlington's husbandry.

Rent, 16 *s.*

Product. Turneps; hoed twice 5 *l.*

Around Raby-castle.

Rent, 16 *s.*

Product. Pease - - - 3 6 0
Turneps; unhoed 3 10 0

From Newcastle to Morpeth.

Rent, 20 *s.*

Product. Beans; unhoed 3 1 0
Pease

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Pease - - 2 2 0

Turneps; hoed, 4l. 4s.

Ditto; unhoed, 3l.

Rape - - 5 0 0

About *Morpeth*.

Rent, 12s.

Product. Beans; unhoed 3 4 0

Pease - - 1 6 0

Turneps; hoed twice or
thrice 3l.

Around *Alnwick*.

Rent, 15s.

Product. Beans - - 5 5 0

Pease - - 2 4 0

Turneps; twice hoed, va-
lue 4l.

About *Belford*.

Rent, 15s. 6d.

Product. Beans; unhoed 7 4 0

Pease - - 3 1 0

Turneps; hoed twice 45s.

At *Waren*.

Rent, 1s. 6d.

Product. Turneps; unhoed 50s.

At *Hetton*.

Rent, 6s. 6d.

Product. Beans; unhoed 2 2 0

Pease - - 1 7 0

Turneps;

Turneps; hoed twice 55 s.

About *Fenton*.

Rent, 11 s. 3 d.

Product. Beans and pease

mixed, unhoed 3 1 0

Pease - - - 2 4 0

Turneps; hoed once or
twice, 50 s.

About *Rothbury*.

Rent, 10 s. 6 d.

Product. Pease - - 1 2 0

Turneps; hoed twice, va-
lue 3 l.

About *Cambo*.

Rent, 15 s.

Product. Turneps; hoed once, va-
lue 3 l.

About *Glenwelt*.

Rent, 12 s. 6 d.

Product. Beans; unhoed 4 3 0

Pease - - 1 7 0

Turneps; once hoed, 50 s.

South of *Carlisle*.

Rent, 15 s.

Product. Pease - - 1 7 0

Turneps, (some few hoed)
50 s.

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About

About *Penrith*.

Rent, 8 s. 9 d.

Product. Pease - 2 0 0

Turneps; unhoed, 50 s.

Keswick.

Rent, 25 s. -

Product. Turneps; hoed, 55 s.

From *Kendal* to *Burton*.

Rent, 1 l. 1 s.

Product. Beans; unhoed, 2 7 0

Pease - 0 7 2

Turneps; unhoed, 5 l. 10 s.

(scarce.)

From *Lancaster* to *Preston*, about *Kabers*.

Rent, 17 s.

Product. Beans - 4 4 0

Pease - 3 6 0

Turneps; unhoed, 8 l.

(used for cattle.)

Around *Garflang*.

Rent, 17 s.

Product. Beans; unhoed, 3 6 0

About *Ormskirk*.

Rent, 15 s.

Product. Beans; unhoed, 3 6 0

Around *Altringham*.

Rent, 20 s.

Product.

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Product. Beans, in drills,
hand-weeded, 5 0 0

Pease ditto - 3 0 0

Turneps; unhoed, but
thinned by hand, 7 1/2
(scarce.)

From Newcastle-under-line to Stone,
about the latter.

Rent, 10 s.

Product. Beans; - 3 6 0

Pease - 3 1 0

Turneps; hoed, 3 1/2

From Rudgeley-bridge to Litchfield,
about Shenstone.

Rent, 15 s.

Product. Pease - 3 6 0

Turneps; hoed once, 35 s.
unhoed, 20 s.

At Aston, near Birmingham.

Rent, 17 s. 6 d.

Product. Pease - 2 4 0

Turneps; hoed 2 1/2. Hoed
better than unhoed by 20 s.

Around Hagley.

Rent, 20 s.

Product. Pease - 3 6 0

Turneps; unhoed, 30 s.

I 2

At

At Broomsgrove.

Rent, 30s.

Product. Beans; set and

hoed - - 5 0 0

Pease - - 3 6 0

Turneps; unhoed, 30s.

From Worcester to Oxford, at Pershore.

Rent, 15s.

Product. Beans - - 3 1 0

Pease - - 3 1 0

Turneps; unhoed, 30s.

About Bendsworth.

Rent, 21s.

Product. Pease - - 3 1 0

Beans, in drills,

hand hoed - 5 0 0

Turneps; hoed once, 45s.

Around Moreton.

Rent, 20s.

Product. Pease - - 2 4 0

Beans - - 3 0 0

Turneps; twice hoed 30s.

From Oxford to Henley, at Bensington.

Rent, 25s. 6d.

Product. Beans, in drills,

hand hoed - 5 0 0

Pease ditto - 4 0 0

Turneps; twice hoed, 2l. 10s.

About

About *Henley*.

Rent, 17 s.

Product. Turneps; hoed once, 3 l.

Around *Maidenhead*.

Rent, 20 s.

Product. Pease - - 3 4 0

Turneps; hoed, 45 s.

About *Harmondsworth*.

Rent, 20 s.

Product. Pease - - 2 0 0

At *Kensington*.

Rent, 40 s.

Product. Beans, in drills,

hand hoed - 6 0 0

About *North Mims*.

Rent, 12 s.

Product. Pease - - 3 0 0

Turneps; hoed, 30 s.

The first proportion to be drawn from this general view of these crops, may properly be that of rent and value; to discover whether the quantity of product arises from the value of the land, or is decided by other circumstances; without being possessed of all such data, our reasonings would at best be very superficial.

Rent to 5 s. an acre.

Places.	Rent. s. d.	Pease.		Mixture.	Beans.		Rape.	Turneps.					
		hoed.	unhoed.		hoed.	unhoed.		hoed.			unhoed.		
								l.	s.	d.	l.	s.	d.
Stevenage to } Luton, }	5		14					2	7	6			
Thrapston } to Oundle, }	5					24							
Stamford to } Grimsthorp, }	4		16			20							
Bawtry to } Doncaster, }			14								1	7	6
Swinton } Moorfield, }	4 6										2	0	0
Waren	1 6										2	10	0
Averages,	4		14 $\frac{1}{2}$			22		2	7	6	2	5	10

Rents from 5 s. to 10 s. per acre.

Around } Stevenage, }	9		17			20		2	7	6			
Wooburn to } Newport }	9 3			20		24		2	0	0			
Newport } Pagnet to } Bedford, }	7		20			24							

Grimsthorp

Places.	Rent.	Pease.		Mixture.	Beans.		Rape.	Turneps.					
		s.	d.	hoed.	unhoed.	hoed.	unhoed.	hoed.			unhoed.		
Grimsthorp to Colsterworth,	10			32		24		2	0	0			
Grantbam to Newark,	10					20							
Doncaster to Rotherham,	9					18		1	10	0			
Leeds to Tadcaster,	8	6		14		26		2	2	6			
York to Barnby- moor,	10			17		17							
Risby,	9	3		17		30	32						
Stillington fleet,	10										1	7	0
Around Thorne,	10					23	28				0	19	0
Marquis of Rocking- ham's Ken- tish Farm,	8			32		40							
Ditto Hert- fordshire,	8			20		32	20	1	16	0			
Around Wentworth,	8			24		30	18	2	0	0	1	0	0
From Be- verley to Driffield,	10			24		28		3	0	0			

Places.	Rent.		Pease.		Mixture.	Beans.		Rape.	Turneps.					
			hoed.	unhoed.		hoed.	unhoed.		hoed.			unhoed.		
	s.	d.							l.	s.	d.	l.	s.	d.
Yedding- bam-bridge, }	6	6		15		24			1	2	6			
Nunnington,	6	3		16		24								
Mr. Turner, }														
Kirklea- tham,	8						40	4	0	0				
Schorton,	10			16		20	25					3	10	0
Slensingford,	8			12								1	15	0
Hetton, near }														
Belford,	6	6		15		18		2	15	0				
Penrith,	8	9		16								2	10	0
Averages,	9		32	18	20	34	22	31	2	4	10	1	16	10

Rents from 10s. to 15s. per acre.

Hatfield to }	12		20				2	10	0
Welwyn,									
Dunstable to }	14		32		25				
Wooburn,									
About Mil- }	13	6	24						
ton,									
Near Stam- }	13		20		26		2	2	0
ford,									

Newark,

Places.	Rent.		Pease.		Mixture.	Beans.		Rape.	Turneps.					
			hoed.	unhoed.		hoed.	unhoed.		hoed.			unhoed.		
	s.	d.							l.	s.	d.	l.	s.	d.
Newark to } Tuxford, }	15		24			24			2	0	0			
West Drayton, I I			24			20			1	16	0			
Woolley, 12 6			15			18			2	0	0			
Hatton, 12 6			10			24								
Howden, 15						20								
Scarborough } to Malton, }	14								1	1	0			
East Newton, 12			16			16	40		2	0	0			
Around } Kirklea- tham, }	13			30			40					3	0	0
Gilsdale, I I 6							40					2	10	0
Greta- bridge to } Bows, }	12		17									3	0	0
Around } Kiplin, }	12 6		20			30	32					4	0	0
Mr. Crowe's } husbandry, }	12 6		32	30										
Craikbill, 13			30									3	2	6
Danby, 12 6			32			22	45							
Mr. Scroope's } husbandry, }	12 6					31			4	10	0			
Morpeth, 12			14			28			3	0	0			

Alnwick,

Places.	Rent. s. d.	Pease.		Mixture.	Beans.		Rape.	Turneps;					
		hoed.	unhoed.		hoed.	unhoed.		hoed.			unhoed.		
								l.	s.	d.	l.	s.	d.
Alnwick,	15		20			45		4	0	0			
Fenton,	11		20	25				2	10	0			
Rothbury,	10		10					3	0	0			
Cambo,	15							3	0	0			
Glenwelt,	12		15			35		2	10	0			
Carlisle,	15		15					2	10	0			
Ormskirk,	15					30							
Rudgeley- bridge to } Litchfield, }	15		30					1	15	0	1	0	0
Perfbore,	15		25			25					1	10	0
North-Mims,	12		24					1	10	0			
Averages,	13		20	28		26	39	2	9	0	2	11	9

Rents from 15s. to 20s. per acre.

Wooburn to } Newport } Pagnet, }	20		20		20								
St. Neor's to } Kimbolton, }	17		12		15		1	15	0				
Kimbolton to } Thrapston, }	17		16										

Sheffield

Places.	Rent. s. d.	Pease.		Mixture.	Beans.		Rape.	Turneps.					
		hoed.	unhoed.		hoed.	unhoed.		hoed.			unhoed.		
								l.	s.	d.	l.	s.	d.
Sheffield to } Barnsley, }	17		20			30		2	0	0			
Holderness,	17 6					40							
Swinton,	16 6		16			16 32					2	10	0
Earl of } Darlington, }	16							5	0	0			
Around } Raby-castle, }	16		30								3	10	0
Newcastle } to Morpeth, }	20		18			25 40		4	4	0	3	0	0
Belford,	15 6		25			60		2	5	0			
Lancaster to } Preston, }	17		30			30					8	0	0
Garstang,	17					30							
Altringham,	20	24			40						7	0	0
Stone,	16		25			30		3	0	0			
Near Bir- } minham, }	17 6		20					2	0	0	1	0	0
Hagley,	20		30										
Moreton,	20		20			24		1	10	0			
Henley,	17							3	0	0			
Maidenhead,	20		28					2	5	0			
Harmonds- } worth, }	20		16										
Averages,	17	24	21	20	40	28	37	2	13	10	3	18	6

Rents from 20s. to 40s. per acre.

Places.	Rent. s. d.	Pease.		Mixture.	Beans.		Rape.	Turneps.					
		hoed.	unhoed.		hoed.	unhoed.		hoed.			unhoed.		
								l.	s.	d.	l.	s.	d.
<i>Richmond to Greta-bridge,</i>	21		16			25					3	12	6
<i>Alnwick,</i>	25							2	15	0			
<i>Kendal to Burton,</i>	21		7			23					5	10	0
<i>Broomsgrove,</i>	30		30		40						1	10	0
<i>Bendsworth,</i>	21		25		40								
<i>Bensington,</i>	25. 6	32			40			2	5	0			
<i>Kensington,</i>	40				48			2	10	0			
<i>Averages,</i>	26	32	19		42	24		2	10	0	3	10	10

General averages.

					Pease.	
					Hoed.	Unhoed.
Rent to 5s. per acre,	—					14
Ditto from 5s. to 10s.	—				32	18
Ditto from 10s. to 15s.						20
Ditto from 15s. to 20s.	—				24	21
Ditto from 20s. to 40s.					32	19
Average,	—	—	—	—	29	18

Pease

Pease and Beans.

	<i>Unhoed.</i>
Rent from 5s. to 10s. -	20
Ditto from 10s. to 15s. - -	28
Ditto from 15s. to 20s. - -	20
	—
Average, - - -	22
	—

From the first view of this table it is evident that rent has very little concern in the production of pease: The mixture may be considered as the same thing, as beans are generally sown rather with an intention of supporting the pease than of having a double crop; sometimes one will fail and another succeed; and the bean being a better bearer than the pea, makes the superiority of four bushels on the side of the mixture. But it is remarkable that the rent from 5s. to 10s. should produce as large a crop as from 15s. to 20s. And in pease alone 10s. to 15s. yields more than from 20s. to 40s. In a word, the product clearly appears to be very little connected with rent, and that in the hoed as well as the unhoed crops: Our common experience justifies this result, for I have

many

many times observed, that this ticklish crop often fails where it has been most expected to yield largely, and frequently on poor dry sandy soils to produce crops that have surprized the owners. This, I think, should be a lesson to the occupiers of good lands not to apply them to the production of a crop, in which the weakest soils may rival them with success.

But the importance of hoeing is extremely visible; the superiority of eleven bushels in twenty-nine is vast; an acre and a half hoed is near as good as two unhoed; this is an object of undoubted importance to the farmer, and demands his warmest attention. It is not the eleven bushels only that he is to consider, although no trifle, but likewise the state of the land after the crop: A poor one of pease suffers the weeds to get so much a head, that the soil is filled with their seeds and exhausted by their growth, consequently is proper only for a fallow; whereas, after a fine clean crop, the land is rendered mellow and in excellent order for any kind of grain; wheat is commonly sown after them, and with great success if the crop is large, or barley, &c. The importance, therefore,
of

of hoeing is manifest, and the amount of the superiority prodigious.

Beans.

	<i>Hoeed. Unhoeed.</i>	
Rent to 5 s. per acre, -	-	22
Ditto from 5 s. to 10 s. -	34	22
Ditto from 10 s. to 15 s. -	-	26
Ditto from 15 s. to 20 s. -	40	28
Ditto from 20 s. to 40 s. -	42	24
Average, -	38½	24

This state is very decisive in most points. Rent we find, as in the case of pease, has little or no effect upon the product: From 20 s. to 40 s. is but two bushels superior to the rents under 5 s. which is surprizing; and with beans requires more explanation than was requisite with pease. It is well known they are scarce ever sown on poor soils, their appearing, therefore, in a scale so low as 5 s. must arise from the rent being very favourable, or from particular circumstances, or perhaps from both; as is the case with many crops that are raised on open field land in *Bedfordshire* and *Northamptonshire*, which from being open is low in rent, and from favour so low as 5 s. There

There are in different parts of the kingdom many tracks of wet, unkindly, open fields, strong enough for beans, that not only lett so low as 5s. but are really worth no more. Now such soils, without proper management, may easily be supposed to yield as good crops as others vastly richer, and for this reason, very fertile land in the hands of a slovenly farmer is eternally over-run with weeds, insomuch that half the crops are ruined by them; the richer the soil the poorer the crop in many cases; and the poorer land not, in its nature, abounding so much with weeds, gains by these means an equality with soils far superior. That this reasoning is just there is great reason to believe, from the progression being different in the hoed crops, which vary eight bushels where the unhoed ones vary but two.

The consequence of hoeing can nowhere be more apparent than here; *two* acres hoed are better by four bushels than *three* unhoed, which difference is very great. The farmer who sows two hundred acres, and hoes them, adjoining a neighbour who has three hundred unhoed, reaps eight hundred bushels more than the latter.

latter. Is not this an argument strong enough? But farther, his neighbour's land is in such a weedy, exhausted condition, that his three hundred acres are thrown by for a fallow; this is the custom of most counties that do not hoe; beans the last crop of the course. On the contrary, the hoeing farmer sows his two hundred acres with wheat, of which he gets to the full as good a crop as his neighbour: What an amazing difference between them at the end of two years! And carry the comparison further, it will soon appear that the difference, in no great number of years, will amount to the value of the fee simple of the land: so great a benefit results, in numerous instances, from small expences; half the four bushels superiority, after the balance of two acres to three, will, in most counties of *England*, hoe an acre twice, and well too; three bushels would any where do it to perfection. The superiority of the hoed is fourteen bushels *per* acre; the farmer would, therefore, by hoeing gain a *clear* profit of eleven bushels, besides saving the expence of a fallow and a year's rent; besides keeping his lands generally in better order *without* fall-

VOL. IV. K lowing,

lowing, than his slovenly neighbour
with.

This, it is true, is only reasoning, but it is reasoning on solid, and indisputable facts, in themselves sufficiently clear to convince the unprejudiced ; but common farmers want gilding even to a sugar-plumb : Is it not astonishing, that while facts speak so strongly, nine tenths of the beans in the kingdom remain unhoed : --- Is it not a disgrace to this land of agriculture, that so many counties should persist in the slovenly custom of depending alone on their flocks of sheep for weeding their beans ! How are such egregious follies to be corrected ? Not by preaching to posts. Let no one accuse me of the vanity of thinking I shall ever by writing wean farmers from their prejudices. --- I do not address myself to them ; but to those from whom all improvements in agriculture must have their origin --- their landlords : It surely much behoves them to exert some attention on an object so essential to the good of husbandry, and consequently to their own advantage.

R A P E.

R A P E.

Rent from 5 s. to 10 s.	-	-	31
Ditto from 10 s. to 15 s.	-	-	39
Ditto from 15 s. to 20 s.	-	-	37
Average	-	-	36

The general rise from 5 s. and 10 s. to 10 s. and 20 s. is something, but not what might be supposed, from a crop that must be fallowed for till midsummer, and consequently not in the same danger of destruction by weeds in rich land, as beans or pease. I attribute the similarity of these products to the practice of paring and burning. --- In a large track of country in the North, they generally pare and burn for rape, which is so excellent a method, that the crops they get on poor land, even on moor land of 2 s. 6 d. an acre, are very great: this is the reason why rent bears no more proportion to the crops.

T U R N E P S.

	Hoed			Unhoed		
Rent to 5 s. per acre	2	7	6	2	5	10
Ditto from 5 s. to 10 s.	2	4	10	1	16	10
Ditto from 10 s. to 15 s.	2	9	0	2	11	9
	K 2			Ditto		

	<i>Hoed</i>			<i>Unhoed</i>		
Ditto from 15s. to 20s.	2	13	10	3	18	6
Ditto from 20s. to 40s.	2	10	0	3	10	10
Average - - -	2	8	10	2	16	9

The conclusion which some would draw at first sight from this table, is the disadvantage of hoeing. And truly this state of the case is, I apprehend, one of the most extraordinary combinations I shall meet with in the whole course of these enquiries. The existence of such a vegetable as a turnep, is not a more certain fact, than the superiority of hoed to unhoed crops; but the above general average seems totally to contradict it; we must, therefore, examine the point minutely, and enquire into the reason of such a seeming paradox.

The prices of all commodities depend upon the quantity to be sold; if turneps are scarcer in one county than in another, with an equality of cattle in each, undoubtedly they will be dearest where scarcest: this is manifestly the case in question: the countries in which hoeing is fully established, are consequently those in

in which the culture is the oldest and most common ; to one acre of turneps in any county that does not hoe ; there certainly is forty in another that does : the existence of such an improvement speaks sufficiently this fact. From hence it results that turneps in the countries that do not hoe, must infallibly be dearer than in those which do bestow that operation on them : This is clear enough from mere *reasoning* ; but *facts* should, in such works as this, be the guide, whenever it is possible to gain them. I shall, therefore, strike a line across the kingdom, and form two averages, one for the North of *England*, the other for the South ; the first in general does not hoe, and the other does : We shall from thence find, that turneps themselves, whether hoed or not, are much dearer in one division than in the other. I shall throw *Yorkshire* and *Lancashire* to the North, and all south of them to the South.

The South.

				<i>Head</i>		<i>Unboad</i>
<i>Hatfield, &c.</i>	—	—	—	2	10	0
<i>Stevenage</i>	—	—	—	2	2	0
<i>Luton</i>	—	—	—	2	7	6
<i>Wooburn</i>	—	—	—	2	0	0
<i>St. Neot's</i>	—	—	—	1	15	0
<i>Stamford</i>	—	—	—	2	2	0
<i>Grimsthorpe</i>	—	—	—	2	0	0
<i>Newark</i>	—	—	—	2	0	0
<i>Drayton</i>	—	—	—	1	15	0
<i>Newcastle-under-line</i>	—	—	—	3	0	0
<i>Litchfield</i>	—	—	—	1	15	0
<i>Birmingham</i>	—	—	—	2	0	0
<i>Hagley</i>	—	—	—	—	—	1 10 0
<i>Bromsgrove</i>	—	—	—	—	—	1 10 0
<i>Pershore</i>	—	—	—	—	—	1 10 0
<i>Bendsworth</i>	—	—	—	2	5	0
<i>Moreton</i>	—	—	—	1	10	0
<i>Benington</i>	—	—	—	2	10	0
<i>Henley</i>	—	—	—	3	0	0
<i>Maidenhead</i>	—	—	—	2	5	0
<i>North Mims</i>	—	—	—	1	10	0
<i>Average</i>	—	—	—	2	2	7
<i>Ditto of both</i>	—	—	—	1	14	3

The

The NORTH.

	<i>Head</i>					<i>Unhead</i>
<i>Doncaster</i>	—	—	—	—	—	1 7 6
<i>Rotterham</i>	—	—	—	1	10 0	
<i>Sheffield</i>	—	—	—	2	0 0	
<i>Woolley</i>	—	—	—	2	0 0	
<i>Leeds</i>	—	—	—	2	2 6	
<i>Stillingfleet</i>	—	—	—	—	—	1 7 0
<i>Thorne</i>	—	—	—	—	—	0 19 0
<i>Marquis of Rockingham's</i>	}					
<i>Hertfordshire farm,</i>						1 16 0
<i>Around Wentworth</i>	—	—	—	2	0 0	1 0 0
<i>Beverley</i>	—	—	—	3	0 0	
<i>Scarborough</i>	—	—	—	1	1 0	
<i>Reddingham</i>	—	—	—	1	2 6	
<i>Newton</i>	—	—	—	2	0 0	
<i>Kirkleatham, Mr. Turner</i>	—	—	—	4	0 0	
<i>Around ditto</i>	—	—	—	—	—	3 0 0
<i>Giltsdale</i>	—	—	—	—	—	2 10 0
<i>Schorton</i>	—	—	—	—	—	3 10 0
<i>Gilling</i>	—	—	—	—	—	3 12 6
<i>Rookby</i>	—	—	—	—	—	3 0 0
<i>Kiplin</i>	—	—	—	—	—	4 0 0
<i>Swinton</i>	—	—	—	—	—	2 10 0
<i>Moor-side farms</i>	—	—	—	—	—	2 0 0
<i>Craikbill</i>	—	—	—	—	—	3 2 6
<i>Slensingford</i>	—	—	—	—	—	1 15 0
<i>Danby</i>	—	—	—	—	—	2 5 0
<i>Mr. Scroope</i>	—	—	—	4	10 0	
<i>Earl of Darlington</i>	—	—	—	5	0 0	
<i>Around Raby</i>	—	—	—	—	—	3 10 0

				Hoed			Unhoed		
Newcastle	—	—	—	4	4	0	3	0	0
Morpeth	—	—	—	3	0	0			
Alnwick	—	—	—	4	0	0			
Belford	—	—	—	2	5	0			
Waren	—	—	—	—	—	—	2	10	0
Hetton	—	—	—	2	15	0			
Fenton	—	—	—	2	10	0			
Rothbury	—	—	—	3	0	0			
Cambo	—	—	—	3	0	0			
Glenwelt	—	—	—	2	10	0			
Carlisle	—	—	—	2	10	0			
Penrith	—	—	—	—	—	—	2	10	0
Keswick	—	—	—	2	15	0			
Kendal	—	—	—	—	—	—	5	10	0
Preston	—	—	—	—	—	—	8	0	0
Altringham	—	—	—	—	—	—	7	0	0
Average	—	—	—	2	14	0	3	1	6
Ditto of both	—	—	—	2	17	9			
General average of the North	—	—	—	2	17	9			
Of the South	—	—	—	1	14	3			
Turneps dearer in the North than							}	1	3 6
in the South by	—	—	—						
Average of hoed crops in the North				2	14	0			
Ditto in the South	—	—	—	2	2	7			
Hoed ones dearer in the former by				0	11	5			
Average of unhoed crops in the North				3	1	6			
Ditto in the South	—	—	—	1	6	0			
Unhoed, dearer in the former by				1	15	6			

From this comparison it plainly appears, that this vegetable is in general dearer in the north than in the south; and I should remark, that the more the tour was extended through the north, the greater disproportion would be found between the quantity hoed and not hoed; and the farther it was extended in the south, the more in proportion would be found to be hoed: hence arises the seeming superiority of the unhoed crops. The unhoed average in the north being superior to that of the hoed, is owing to the same reason; several places are minuted where turneps are so scarce as to be valued, even for cattle, at 7*l.* and 8*l.* This raises the average of the unhoed crops, for we may be assured, from such scarcity, that hoeing is quite unknown.

But there is another very strong and convincing proof, that, in every country, hoed turneps are superior to unhoed ones, and that is, the several comparisons made in the respective places; for instance, near *Litchfield*, the hoed crops sell at 35*s.* but the unhoed at only 20*s.* Near *Birmingham* the hoed at 40*s.* the unhoed at no more than 20*s.* Around the Marquis of *Rocking-*

Rockingham's, the hoed at 40s. the unhoed at only 20s. At *Raby-castle*, the hoed at 5*l.* the unhoed 3*l.* 10s. Near *Newcastle*, the hoed 4*l.* 4s. the unhoed no more than 3*l.* These places include both the north and south; the superiority of the hoed crops is very great; and the comparison being made on the same soils, and in the same places, it amounts to demonstration.

Those gentlemen who are unprejudiced, or who have practised agriculture, may perhaps be surprized at my bestowing so much attention, in proving what is acknowledged by the most sensible part of mankind; but they are not acquainted, nor possibly can conceive, the number of sticklers in the north, even among gentlemen, for *the good old way*, and as to nine-tenths of the farmers, they treat the idea of hoeing with contempt. Many butchers and graziers will not buy hoed turneps, and one in particular, famous in the neighbourhood of *Kiplin* and *Craikbill*, in the *North-Riding* of *Yorkshire*, who purchases every year some hundreds of acres, but will not allow an equal price for one that is hoed. If the landlords in that neighbourhood are really desirous of introducing so excellent
a cus-

a custom as hoeing, I would earnestly advise them to begin with hanging up that fellow, and introducing a south country butcher in his place. Until I hear of his swinging in a field of unhoed turneps, I shall have no great hope of the neighbourhood.

While such very extensive tracks of country continue in so great an error, and while even gentlemen countenance it, I do not think any endeavours to effect a change of conduct should be omitted, or that one's attention is wasted in examining the whole state of the affair.

But it is further requisite to observe, that the great benefit of hoeing is not to the crop alone, but to all the succeeding ones in the course: In this respect, what I before remarked concerning hoeing of beans, is in part applicable to turneps, only much more strongly, for beans are not made a fallow crop (that is, succeeded by corn) in slovenly management near so often as turneps: I know not any part of *England* in which land is fallowed the year succeeding turneps; they are every where considered as a fallow, and barley generally sowed after them: The terrible effects of
this

this conduct must be prodigious, for the unhoed crops of turneps are (except on pared and burnt land) universally full of weeds, that have time to perfect, and drop their seeds, besides exhausting the soil of that nourishment which the crop ought to possess. The barley that succeeds must infallibly be a weedy crop, and if the course goes on, the soil must be quite poisoned with trumpery.

But relative to the turneps themselves, the difference between the hoed, and the unhoed ones, is greater than commonly imagined in the north. The very best field to be found at *Kiplin*, a fine gravelly soil, of 16s. an acre, and the very best spot in the whole field, weighed under thirteen tons, which would certainly reduce the average product of the neighbourhood to four or five tons : Now such a soil, well managed, and without dung, whereas that field was well manured, should produce, on an average, thirty tons *per* acre, and thoroughly manured, from forty to fifty tons, which is full ten times greater than the produce of that neighbourhood ; and I should not exaggerate, if I said twenty times greater than the
average

average of all unhoeing countries; a difference so prodigious, that it is really astonishing landlords do not exert themselves to introduce the practice.

But when I speak of hoeing in general, I would never be understood to mean such hoeing as I have seen more than once in unhoeing countries. In the *East-Riding* of *Yorkshire* they hoe in some places, but in so slovenly a manner, that I would not give sixpence a field for the operation; and yet it is done but once, and reckoned a great feat in good husbandry. Turneps should always be hoed twice, and every plant set out from twelve to eighteen inches distance, according to the strength of the soil, and not a weed suffered to grow.

But in what manner, say some, is this change to be effected? I reply, not without trouble; a man must not expect to stamp with his foot, and have hoed plants sprout from the soil. The first object is to enter spiritedly into the hoeing husbandry themselves, and not be contented with the hoers of the neighbourhood, if they do not understand the work in perfection: Men are easily enough to be procured in every

every part of *Britain*, that will change their residence for a time if they are well paid: Some landlords, who own several thousands of acres of land, have talked to me of the difficulty of getting turnep-hoers; were I possessed of a tenth of their estates I would have them from *Indus*, rather than go without them: But the difficulty is nothing, a little resolution and money would overcome such paltry objections*. They should never suffer an acre of turneps to be seen on their own land that was not hoed in the last perfection, except here and there a stripe left quite unhoed, for the tenants to see the difference. This has been the plan of that excellent cultivator the Marquis of *Rockingham*, who carried good hoers from the south, and, by spirited exertions, brought the practice, by degrees, to bear, and will in time render the turnep crops around *Wentworth* as clean

* I have some reason for this remark: in *Hertfordshire* no plough stirs without four horses and a driver, except my own. I have ploughs, horses, and men from *Suffolk*, and if I lived in the Highlands of *Scotland* I would have good turnep-hoers.

as any in *England*. Much does his country owe to such a conduct!

In the next place, landlords ought to obviate all the objections of their tenants; procure them hoes (none on any account shorter than ten inches) and hoers, that no excuses under those heads may be made by them; and if they have a pernicious butcher or grazier that rejects hoed turneps, hang him, as I said before, and transplant a more rational animal in his place. But in the introduction of all new modes of husbandry, no method is of such efficacy as the fixing a little colony of farmers on an estate that have from their infancy been used to the good custom that is wanted to be introduced. A single one will not often effect it, his neighbours will laugh him too much out of countenance; but when two or three are ready to stand by each other, they will have the greater satisfaction in doing what they know is right. The Marquis of *Rockingham's* establishment of a *Kentish* and a *Hertfordshire* farm was a most excellent method of setting a good example, and raising an emulation that must have great effects.

Lastly,

Lastly, it should be an established maxim never to allow turneps unhoed to be a fallow; completely hoed they should be so esteemed, but when slovenly done, or not at all, they should be reckoned a crop, and the number in the course regulated accordingly. This would have very great effect; it would be talking to the farmers in a stile they understand, feelingly.

Whatever depended on praise and encouragement should be exerted, for kind words, from a good landlord, will always have their weight. Mr. Crowe, of Kiplin, purchased a large silver cup last spring, upon which is engraved, *For the best six acres of hoed turneps, 1769*, and a space left for the tenant's name that wins it. It is to be displayed on the rent-day, and delivered on that which follows. The thought was an excellent one, and will, beyond doubt, have a good effect.

The importance of an accurate culture of these ameliorating crops is not sufficiently known among the common farmers in nine-tenths of the kingdom. It has been so long an idea, that all land must be fallowed, that landlords have universally been extremely backward to admit any vegetable

ble as a substitute; and no wonder, since bad tenants are always so free with sowing exhausting crops, and running the soil out of heart; both reasons have concurred to keep back so profitable a branch of agriculture. It is a fact, that no land absolutely requires a fallow; but then the husbandry should be very spiritedly executed to keep it clean, particularly heavy soils: Upon light or dry ones, turneps and clover, properly introduced, are undoubtedly preferable to a fallow; and upon clays and strong loams, beans are an excellent substitute to turneps, admit the soils being kept as clean as a fallow; particularly if sown in drills (which is much the cheapest method of cultivating them) and equally ameliorates it. But I need not surely add, that all these extremely beneficial effects depend entirely upon the turneps and beans being kept in complete order, without a weed in them, and the surface so loosened by hoeings, as always to be in a state of pulverization; the profit of this husbandry is very great; if well executed it is two hundred *per cent.*

more advantageous than the common methods.

Having endeavoured to analyze these crops, you will allow me, before I proceed to others, to conclude myself, &c.

L E T.

L E T T E R XXVII.

POTATOES are a crop which in many circumstances resemble those I considered in my last letter; they are of an ameliorating nature, a large product of them being more beneficial to the soil than even a fallow; and they probably yield an increase proportioned to the culture bestowed on them while growing; but yet it would have caused much confusion to have joined them together; for potatoes vary from all the rest in numerous circumstances, besides that material one of not being a common article of culture in very extensive tracks of country through which this tour was made. I shall first lay before you a general state of their culture and produce, and if it gives rise to any average accounts, shall extract them accordingly.

At Sandy in Bedfordshire.

Soil. A rich deep black sand.

Rent, 3*l.* 10*s.*

Seed and distance. Twenty bushels at one foot every way.

Culture. Hoe them thrice.

Product. 250 bushels, 20*l.* 16*s.* Expences, 12*l.* 18*s.* 6*d.* Profit, 7*l.* 17*s.* 6*d.*

About Doncaster.

Soil. A fine light rich loose sand.

Product. 250 bushels.

About York.

Soil. Light. 12s. per acre.

Planted in two feet rows, and earthened up with hoes.

Product. 60 bushels.

At Cottingham near Hull.

Soil. Rich loam and mixed clay, at 3l. per acre.

Seed, &c. twenty bushels. Hoe several times.

Product. 180 bushels.

About Stillingfleet.

Soil. Sandy, at 14s.

Seed, &c. Sixteen bushels, rows two feet, plants one foot; horse hoe them two or three times, and hand weed them.

Product. 80 bushels.

Mr. Turner, at Kirkleatham.

Soil. A light poor sand, at 8s.

In rows three feet, plants one foot; horse hoed once, and hand hoed once; twice weeded.

Product. 588 bushels.

Ditto, a rich black loam, well manured.

In beds four feet wide, three rows on each; alleys two feet; plants eighteen inches asunder.

Product. 1166 bushels.

Mr. Crowe; Kiplin.

Soil. Clay, at 12s. 6d.

Culture. Manures with long dung or
haulm; plants in rows two feet
afunder, plants nine inches; twelve
bushels to the acre; four horse
hocings, and well hand hoed.

Product. 120 bushels. Feeds all
forts of cattle.

Mr. Smelt, at *The Leases*.

Soil. Gravel.

Culture. Manure, four loads of long
dung; sets in rows fifteen inches,
ten from set to set; fifteen bushels
feed. Kept clean from weeds.

Product. 130 bushels.

Sawinton moor-side farms.

Soils. Black moory land, at 4s. 6d.

Product. 120 bushels.

The Colliers' moor husbandry.

Soil. Black peat earth.

Culture. In rows two feet, sets one
foot; thirteen bushels.

Product. 158 bushels.

Mr. Dalton, *Sleninford*.

Soil. Light loam on limestone, at 8s.

Culture. Rows, three feet; ten loads
of dung. Horse and hand hoed.

Product. 150 bushels.

Mr. Scroope at Danby.

Soil. A sandy loam, at 12 s. 6 d.

Culture. Plants, one foot asunder, a handful of dung to each, five loads; eight bushels sets; horse and hand hoed.

Product. 216 bushels.

Near Newcastle.

Soil. Sandy, at 20 s.

Culture. Twelve bushels of sets, at one foot square; hand hoe twice, and hand weed.

Product. 226 bushels.

At Morpeth.

Soil. A loamy clay, in general 12 s. but planters give 5 l.

Culture. Twenty-five loads, dung; dibbled one foot square, dig for them; twenty-three bushels; hand hoe thrice.

Product. 350 bushels. Expences

12 l. 5 s. 6 d. Profit 5 l. 4 s. 6 d.

At Alnwick.

Soil. Gravelly loam, at 15 s.

Culture. Dig and plough for them, and dung; nine bushels feed; twelve inches square.

Product. 150 bushels.

At

At Belford.

Soil. Strong loam, at 15s. 6d.

Culture. Fourteen inches square;
six bushels; hand hoe twice.

Product. 42 bushels.

About Rothbury.

Soil. Gravel, sand, and moory, at
10s. 6d.

Culture. Manure; and hand hoe once
or twice.

Product. 80 bushels.

At Glenwelt.

Soil. Sandy, &c. 12s. 6d.

Culture. Twelve loads long dung;
twenty bushels in one foot square;
hoe twice.

Product. 220 bushels.

South of Carlisle.

Soil. Light loam, at 15s.

Culture. Manure well, in rows eight-
teen inches, one foot plant to plant;
horse hoe.

Product. 300 bushels.

About Penrith.

Soil. Various, at 8s. 9d.

Culture. Manure with long dung;
rows eighteen inches, one foot the
plants; hand hoe.

Product. 120 bushels.

Keswick.

Soil. Hazle-mould, sand, &c. at 25s.

Culture. Two sorts; in furrows eighteen inches by twelve. Manure well; horse hoe, and weed. The other the lazy-bed, dung on grass, and earth out of trenches.

Product. In the first 300 bushels, which is more than the other.

From Kendal to Burton, about Holme.

Soil. Light loam on limestone, at 21s.

Culture. Lazy-bed, dung the grass well; eighteen bushels sets, seven inches square.

Product. 180 bushels.

At Kabers.

Soil. Light loam and sand, at 17s.

Culture. Plough for, dibble eight or ten inches square; weed them.

Product. 150 bushels.

About Garflang.

Soil. Light loam, at 17s.

Culture. Dig all the land nine inches deep; dibble in nine inches asunder; hand weed.

Product. 380 bushels.

Around Ormskirk.

Soil. Light loam, at 15s.

Culture. Manure well, on both grass and

and arable, plough for them; sets
nine inches square; hand weed.

Product. 150 bushels.

About Altringham.

Soil. Sandy loam, at 20 s.

Culture. Dig for them; manure well,
dibble twenty-two bushels; hand
weed and hand hoe.

Product. 700 bushels.

At Knotsford.

Soil. Sandy, at 16 s.

Culture. Dig grass; twenty bushels,
at one foot square, dibbled; hand
hoe and weed.

Product. 500 bushels.

Around Stone.

Soil. Sandy, at 16 s.

Culture. Manure grass well, and dig
it in; hand hoe.

Product. 450 bushels.

About Shenstone.

Soil. Sandy, at 15 s.

Culture. Dung grass well, and dig in;
dibble ten inches square; hand hoe
well.

Product. 400 bushels.

Near Birmingham.

Soil. Sandy, at 17 s. 6 d.

Culture.

Culture. Dig up grass land, and dibble in sets.

Product. 550 bushels.

At Bendsworth.

Soil. Clay, and some light, at 21 s.

Culture. Manure well with long dung; dibble in rows, one foot square.

Product. 350 bushels.

Kensington.

Soil. Sand and gravel, at 40 s.

Culture. Dung well, and plough in rows, one foot, plants six inches; hoe twice and weed.

Product. 15 l. as they grow.

As there is a great variety in these products, I shall throw them into divisions according to the quantity, without any other rule; as it will then in general appear what soil and management are most adapted to them. First, all that produce five hundred bushels and upwards; second, such as yield from two to five hundred; and third, those that yield under two hundred.

Crops

Crops of 500 bushels, &c.

<i>Places,</i>	<i>Soil,</i>	<i>Sets,</i>	<i>Rows,</i>	<i>Culture,</i>	<i>Product,</i>
Mr. Turner,	Sand, 8 s.	—	3 feet by 1,	{ Horse and hand hoed,	588
Ditto, }	Black loam, worth 40s.	—	18 inches,	Dug for,	1166
Altring- ham, }	Sandy loam, 20 s.	22	— —	{ Dig for them, manure, hand hoe, & weed,	700
Knotsford,	Sand, 16s.	20	1 foot sq.	{ Dig grafs, dib- ble, hand hoe, and weed,	500
Birmingham,	Sand, 17s. 6d.	—	— —	{ Dig grafs and dibble in sets,	550
Averages,	— 20 s.	21	—	— —	700

Crops from 200 to 500.

<i>Places,</i>	<i>Soil,</i>	<i>Sets,</i>	<i>Rows,</i>	<i>Culture,</i>	<i>Product,</i>
Sandy, }	Rich sand, 3l. 10s.	20	1 foot sq.	Hoe thrice,	250
Doncaster,	Sand,	—	— —	- - - -	250
Mr. Scroope, }	Sandy loam, 12s. 6d.	8	1 foot sq.	{ Five loads of dung, horse and hand hoe	216
Newcastle,	Sand, 20s.	12	Ditto,	{ Hand hoe twice and weed,	226
Morpeth,	Loamy, 5l.	23	Ditto,	{ Dug for; twenty- five loads of dung, hand hoe thrice,	350
					Glenwelt,

<i>Places,</i>	<i>Soil,</i>	<i>Sets</i>	<i>Rows,</i>	<i>Culture,</i>	<i>Product,</i>
<i>Glenwelt,</i>	<i>Sandy, 12s 6d</i>	20	1 foot sq.	{ Twenty loads of long dung ; hoe twice, }	220
<i>Carlisle,</i> }	{ <i>Light loam, 15s.</i>	—	{ 18 inches by 12,	{ Manure well ; horse hoe, }	300
<i>Keswick,</i> }	{ <i>Hazel mould 25s.</i>	—	Ditto,	{ Ditto and ditto, and weed, }	300
<i>Garstang,</i>	<i>Light, 17s.</i>	—	9 inch. sq.	{ Dug for, and hand weed, }	380
<i>Stone,</i>	<i>Sand, 16s.</i>	—	— —	{ Manure grass, dig it in, and hand hoe, }	450
<i>Shenstone,</i>	<i>Ditto, 15s.</i>	—	10 inch. sq.	{ Dung grass and dig it, hand hoe, }	400
<i>Bendsworth,</i>	<i>Light, 21s.</i>	—	1 foot sq.	{ Manure well ; long dung, }	350
<i>Averages,</i>	<i>1l. 9s. 5d.</i>	16			307

Crops under 200 bushels.

<i>Places,</i>	<i>Soil,</i>	<i>Sets,</i>	<i>Rows,</i>	<i>Culture,</i>	<i>Product,</i>
<i>York,</i>	<i>Light, 12s.</i>	—	2 feet rows	{ Earthed up with hoes, }	60
<i>Cottingham,</i> }	{ <i>Rich loam, 3l.</i>	20	— —	{ Hoed several times, }	180
<i>Stillingfleet,</i>	<i>Sandy, 14s.</i>	16	2 feet by 1	{ Horse hoe and weed, }	80
<i>Mr. Crowe,</i>	<i>Clay, 12s 6d</i>	12	2 ditto by 9 inches,	{ Manure long dung, horse hoe 4 times, and weed, }	120

Places,

Place,	Soil,	Sets,	Rows,	Culture,	Product,
Mr. Smelt,	Gravel,	15	15 inches by 10	Manure 4 loads long dung. Kept clean.	130
Swinton,	Moory, 4s 6d	—	—	—	120
Ditto,	Ditto,	13	2 feet by 1	—	158
Mr. Dalton,	Light, 8s.	—	3 feet	Manure ten loads dung; horse and hand hoe,	150
Alnwick,	Gravelly, 15s	9	1 foot sq.	Dung and dig; and manure,	150
Belford, {	Strong loam, 15s. 6d.	6	14 inch. sq.	Hand hoe twice,	42
Rothbury, {	Various. Light, 10s 6d	—	—	Manure and hand hoe	80
Penrith,	Various, 8s 9d.	—	18 inches by 12,	Ditto and ditto,	120
Holme, {	Light loam, 21s.	18	7 inch. sq.	Lazy bed, dung the grass,	180
Kabers,	Light, 17s.	—	10 ditto,	Weed them,	150
Ormskirk,	Ditto, 15s.	—	9 ditto,	Manure well on gr. and ar. weed,	150
Averages,	16	13	—	—	124

Average produce of first division, — — — 700

Ditto of the second, — — — 307

Ditto of the third, — — — 124

General average, 377.

Average of sets in first, — — — 21

Ditto in the second, — — — 16

Ditto in the third, — — — 13

General average, 16.

It

It is very evident from these tables that rent is no more a guide to product than the wind; nor is any particular soil (except the sandy and light being generally the best) a mark whereby to point out the scale of produce. The distance of the rows, and the quantity of sets, as well as the material articles of manuring and cleaning, are none of them, separately taken, at all decisive in fixing the superiority. Thus much, however, may be observed, that the more considerable products are those that are in general very spiritedly cultivated; all in the first division, except one, are dug for, and likewise the best of those in the second; this seems as if digging for them was much superior to ploughing: The strong variations we otherwise observe must certainly be attributed to fertility of soil, richness of manuring, or a general excellent management: A circumstance greatly encouraging to all who are willing to cultivate this most useful vegetable, for there is great reason to suppose, that a vigorous conduct in raising potatoes will more than ballance every other advantage.

It should be observed, that these roots are every where considered as an excellent fallow crop, greatly ameliorating the soil, and preparing in every respect for wheat in particular, or for any other grain in a
very

very superior manner. It is extremely evident from the preceding tables that their culture is uncommonly profitable. In numerous places I was assured that they made infinitely more by potatoes than by any other crop. The price of them are various, but at 1 s. 6 d. a bushel, the average product amounts to above 28 l. but 1 s. 6 d. is a low price: It is a great error in many parts of this kingdom the not cultivating potatoes in large quantities.

No fallow crop is more advantageous to the soil, nor could there be a greater improvement in three fourths of the counties of *England*, than introducing potatoes into the courses of their fields, as regularly, upon soils proper for them, as turneps or any other vegetable.

The common objection to cultivating them in large quantities is the want of a market; but such a plea is an absolute piece of gothicism: The most advantageous use they can be applied to, where they bear an high price, most certainly is to sell them; but where the prices are low, or the market overstocked, this root should be applied to feeding and fattening cattle, in which the profit will be very great, both in the price paid for the crop and in the great improvement of the farm, by raising large quantities of manure; an object which ought always

to be foremost with every farmer: The intelligence received of Mr. *Crowe*, of this application of his crops at *Kiplin*, to feeding all sorts of cattle and poultry, is particularly valuable; it is well known in several places, that no food is better for rearing and fattening hogs, but I never before heard of feeding promiscuously all the stock in a farm-yard on them; but that gentleman's long experience proves it not only to be eligible, but extremely profitable.

If potatoes came in once every course of crops on light or rich soils, not very heavy, and were all applied to fatten numerous herds of swine, or to maintain oxen, cows, young cattle, &c. the improvement of the whole farm would be the certain consequence; for the fields in which they are cultivated are finely enriched by themselves, and their consequences in manuring would perform the same office to others.

From what I have remarked in the tour, I have reason to think digging a much superior method to ploughing, with the sets laid in the furrows. The latter way may be very proper in a very light rich sand; but in sandy or gravelly loams the digging is superior: If I was to recommend a practice it should be the following; which I think, from the preceding minutes, as well as my own experience, is excellent.

Units

Unite the ploughing and lazy-bed methods; first plough the land fine, in beds about five feet broad, then spread your dung; if the soil is very light, it should be well rotted and mixed together; but if the land is inclinable to stiffness, then long dung, old thatch, stubble, or any thing of that kind; upon the manure lay the potatoe slices promiscuously, about a foot asunder; cover them three inches deep, with earth dug out of the furrows, a trench in each like a water furrow, about eighteen inches wide. When the potatoes are about four or five inches high, weed them, dig another spit in the trenches, and cover the beds and plants two inches deeper; this will stop the growth of most weeds, but if any arise, draw them out, but never hand hoe unless the surface binds, which on proper soils it will not do: Vast crops may be had in this method, and the beds left in excellent order for a crop of any thing else. I remain yours, &c.

L E T T E R XXVIII.

YOU certainly must have remarked in the minutes of this journey, that no tillage crop (all which I think we should consider before we come to grass lands or general œconomy) makes so distinguishable a figure as CABBAGES. This branch of field culture is *new* in *England*, although it has been used in *Germany*, and some of the more northern parts of *Europe*, for many years, perhaps ages. I do not remember cabbages being expressly treated of as food for cattle in any book of husbandry, until Mr. *Randal* published his *Semi Virgilian Husbandry* a few years ago. He therein *recommends* the culture of the large *Scotch* for fatting oxen, enters particularly into *directions* how to prepare for them, and *asserts* their being particularly profitable. As that gentleman was a practical farmer, I take it for granted that he has cultivated them, tho' I think he does not expressly mention it. He does not insert one experiment upon them: the preparation he recommends is prodigiously expensive, more so, I apprehend, than trench digging

digging land two feet deep; insomuch that the culture of this excellent vegetable would never have extended itself, if such costly methods had been considered as really requisite.

The publick heard nothing farther upon this branch of agriculture, till Mr. *Wynn Baker*, under the patronage of the *Dublin Society*, published some experiments upon the turnep cabbage, and boor cole: they were few, but extremely valuable; executed with an accuracy, and related with a precision not often found in writings on husbandry.

Since the publication of Mr. *Baker's* report, we have had no fresh intelligence concerning cabbages: there is not extant in print a single experiment upon the Great *Scotch* sort: It is with the utmost pleasure that I minuted in my journey all the intelligence I could gain concerning this vegetable: I was fortunate enough to meet with many gentlemen that had cultivated it for several years; some of them, from the curiosity of the object, had made accidental minutes of several circumstances of the culture, expences, produce, &c. these they favoured me with, and in other particulars gave me accounts from their own memory, and that of their servants: but as I had not any regular registers of experiments

riments in a series, I threw the intelligence I received into as clear and methodical an order as I was able. So far did very well for each minute; but as the circumstances of culture, product, and value, have great variations, it is here absolutely necessary to draw all these fugitive articles into one point of view; to compare the intelligence, and to draw the averages of every circumstance, that the culture and value of cabbages may be completely known. I shall make the extract in as few words as possible; the article begins with

Mr. Middlemore at Grantham.

Sort. *Battersea*, turnep, and *Scotch*.

Soil. A red sand.

Time of sowing. Beginning of *March*.

Once pricked out, and planted at midsummer.

Rows. Four feet asunder, from one foot to eighteen inches from plant to plant. 6000 *per acre*.

Culture. Watered in dry weather.

Duration. To *April*.

Product. Turnep cabbage 5 *lb.* or nineteen tons *per acre*; *Battersea* 11 *lb.* or forty-two tons *per acre*; *Scotch* 14 *lb.* or fifty-four tons. Used for fattening oxen and feeding sheep.

Expences. Pricking out and transplanting, 1 *s.* *per thousand*.

Mr.

Mr. *Lyfter* at *Bawtry*. The *Scotch* sort.

Soil. A very light sand.

Rent, 11 s.

Time of sowing, &c. End of *Jan.*
or beginning of *Feb.* Transplant
the middle of *June*.

Rows. Four feet asunder, plants two
feet. 6240 plants.

Culture. Horse hoed thrice, and hand
hoed.

Duration. Begin to burst in *October* ;
all must be done by *Christmas*.

Product. Twenty-seven tons. Feed-
ing cows both dry and milch, rear-
ing young cattle, and feeding sheep.
Will not go near so far as turneps.

Expences. Six men plant an acre a
day.

Mr. *Wharton* at *Doncaster*. The Great
Scotch.

Soil. A light sand.

Rows. Three feet, plants two.

Culture. Hand hoeing.

Duration. Late in spring, to turning
into grass.

Product. Two acres completely fat
three large beasts.

Mr. *Tucker* at *Rotherham*. The Great
Scotch.

Soil. A light sandy loam, extremely
rich.

Rent, 2 l. 5 s.

Preparation. Winter fallow; and ten loads rich rotten dung.

Time. Middle of *August*; and the spring. The first pricked out the middle of *October*; transplant the last week in *May*; the others not pricked out at all. The winter plants the largest.

Rows. Four feet, plants, two and two and half. 5000 *per acre*.

Culture. Watered if dry; two horse hoeings, and hand hoeing.

Duration. End of *March*; some to beginning of *April*. Some want cutting before *Christmas*, the winter plants.

Product. One crop 30 *lb.* another 10 *lb.* average 20 *lb.* or forty-four tons *per acre*. — Two acres and a half, under 10 *lb.* kept (with some straw) twelve cows the principal part of the winter. If milch cows are kept constantly on them, without other food, the butter is rank. Fat oxen; feed pigs.

Expences. A man plants two thousand in a day.

Profit. Very great. More than ten quarters of oats after them, and eight the second crop.

Mr.

Mr. Ellerker's at Risby. Large Scotch.

Soil. Loam on a chalkstone.

Rent, 9 s. 3 d.

Preparation. A winter fallow; manures, ten loads of farm yard dung.

Time. Sows the end of *February* — pricks out once; plants the beginning of *June*.

Rows. Three feet; plants two.

Culture. Water in dry seasons. Horse hoe once to thrice.

Duration. To the end of *April*.

Product. Fats two beasts completely, of thirty-six stone each (14 lb.)

Completely fats such, and finishes others of eighty stone: has sold oxen of 23 l. from cabbages.

Expences. A man plants an acre in three days.

Profit. Exceedingly great.

Marquis of Rockingham's *Kentish* farm.
Great Scotch.

Soil. A rich, deep, black loam.

Time. Sows the end of *February*; plants the middle of *June*.

Rows. Three feet, and plants three feet.

Culture. Water in dry weather. —

From three to five horse hoeings, besides hand hoeing.

Product. Worth, for feeding any cattle, a halfpenny each, the number of plants being 4840; that is, 10 *l.* 1 *s.* per acre. Fat oxen chiefly.

His Lordship's *Hertfordshire* farm, the same as the preceding, except only hand hoeing.

Mr. *Wilson*, *Ayton*. *Scotch* fort.

Time. Sows in *September*, plants in *May*.

M. *Turner* at *Kirkleatham*. The average of twelve experiments.

Soil. Clay, loam, and rich sandy loam.

Rent, 15 *s.*

Preparation. Winter fallowed; and some a whole year. Some crops limed.

Time. Sows the latter end of *February*, and in *March* for spring plants; and in *August* for winter ones. Transplants thro' the months of *May* and *June*.

Rows. Three to four feet, and plants two. Generally 5445 plants.

Culture. Horse hoed twice, and hand hoed as often. Never waters.

Duration. To *Candlemas*.

Product. In general from twenty tons to fifty-eight; average thirty-nine.

Fats

Fats and feeds oxen, cows, young cattle and sheep infinitely better than any other food. The increase of one cow's milk from cabbages two quarts a day, but it tasted. The improvement of an ox of 80 stone, (14 *lb.*) fatting four months on cabbages, is on an average 5*l.* 10*s.* and in proportion *per* ton (the hay he eats deducted) is 8*s.* 6*d.* the value of the cabbages. Upon the whole go much farther than turneps, and prepare much better for spring corn.

Quantity eat. An ox of eighty stone 210 *lb.* in twenty-four hours, besides 7 *lb.* of hay.

Expences. After a summer fallow 3*l.* 15*s.* 6*d.* a winter ditto 2*l.* 7*s.* — Expence of watering is 2*s.* 11*d.* planting 4*s.* 6*d.* hand weeding 2*s.* 6*d.*

Anjou cabbages tried, but proved good for little.

Mr. Crowe at *Kiplin*. The average of eight years. Great *Scotch*.

Soil. Clay.

Rent, 12*s.* 6*d.*

Preparation. Winter fallows and limes, a chaldron *per* acre.

Time.

Time. Sows in *August* for winter plants, pricks out at *Michaelmas*, and transplants in *March*: For spring plants (of which he has but few) sows in *February*, transplants the end of *May*, or beginning of *June*.

Rows. Four feet, and plants two.

Culture. Horse and hand hoe, as requisite; never water.

Duration. Until *May-day*.

Product. In 1762, they weighed *per cabbage* 12 *lb.* or, *per*

acre	-	-	-	29 Tons
1763,	—	14 <i>lb.</i>	—	34
1764,	—	12 <i>lb.</i>	—	29
1765,	—	20 <i>lb.</i>	—	48
1766,	—	18 <i>lb.</i>	—	43
1767,	—	15 <i>lb.</i>	—	36
1768,	—	11 <i>lb.</i>	—	27

Average 35 tons.

Used for all sorts of cattle, and with universal success.

Expences. At 10 *s.* rent, the total 2 *l.* 4 *s.* 6 *d.* Seed, 6 *d.* Pricking out and transplanting, 5 *s.* each. Hand-hoeing, 4 *s.*

Mr. *Smelt* at *The Leases*.

The average of five years.

Soil. Sandy, gravel.

Preparation. Winter fallow, and manure

nure with seven loads of rotten dung.

Time. Sows the beginning of *March*, and transplants in *May*.

Rows. Four feet asunder, and two the plants.

Culture. Horse hoes four times, and hand hoes and weeds.

Duration. Until the end of *March*.

Product.

In 1763, the cabbages weighed upon an average 7 lb. or, per

acre	—	—	17 Tons
In 1764,	—	8 lb.	19
In 1766,	—	8 lb.	19
In 1767,	—	8 lb.	19
In 1768,	—	6 lb.	15

Average 18 tons.

Uses them for steers and sheep, but principally for cows, on account of the butter being incomparable, and given in great quantities, not more in height of summer; butter keeps a fortnight, but the cows must have no decayed leaves.

A gentleman near *Craik-hill*.

The great *Scotch* fort.

Soil. Gravel.

Rent, 13 s.

Average of four year, 17l. 15s. 2d.

Use

Use them for oxen, cows, and sheep, with the utmost success. Two cows in *January*, one that had newly calved, and the other to calve at *Lady-day*, produced in a week 17 lb. 10 oz. of butter.

Mr. Dalton at *Sleningford*.

Soil. Light loam on a lime-stone, very shallow.

Rent, 8 s.

Preparation. Winter fallow, and a dunging.

Time. *Scotch*, transplanted the beginning of *June*. Turnep cabbage sown in spring, transplanted in *May*.

Rows. Four feet by twenty-two inches.

Culture. Horse and hand hoeing.

Product. *Scotch*, 4 lb. and 1 lb. average $2\frac{1}{2}$, or 6 tons. Turnep 5 lb. 12 tons. The first given to cows, and made the butter absolutely stink, but attributed it to the decayed leaves not being taken off. The latter were given to sheep the middle of *April*, who were very fond of them.

Mr. Scroop at *Danby*. The *Scotch*.

Soil. Clay, loam, and rich black land.

Rent,

Rent, 4s. 6d. to 25s. average 14s. 9d.

Preparation. Winter fallow, and upon all but the richest soils, manures with composts or lime.

Time. Sows early in the spring, and transplants the end of *May* or beginning of *June*.

Rows. Four feet, and two feet from plant to plant.

Culture. Never waters. Two horse and two hand hoeings.

Duration. Till the end of *April* or beginning of *May*.

Product. Average value of seven years, at 5s. 9d. per ton, 9l. 16s.

	Tons
1763, - - - -	34
1766, - - - -	52
Ditto, - - - -	40
Ditto, - - - -	23
Ditto, A - - - -	25
1767, - - - -	40
Ditto, - - - -	25
Ditto, - - - -	53
1768, - - - -	35
Ditto, - - - -	50
Ditto, - - - -	30

Average 37 tons.

Oxen of 100 stone, that have had the summer's grass, are finished and without delay, never going back in flesh,

flesh, (the case oftentimes with turneps) and improving faster than on any other food. All kinds of young cattle maintained through winter in full health and growth to great profit. Cows fed with them to more advantage six to one than upon any other food; the milk being great in quantity, perfectly sweet, and the butter excellent, but the precaution must be observed of picking off the decayed leaves. Fat sheep are carried forward in great perfection, better infinitely than on turneps. Lambs of ewes fed on them have always proved uncommonly fine and strong. Swine feed very freely on them, and are kept in very good condition without other food.

Quantity eat. An ox of 100 stone (14 l.) in twenty-four hours eat 168 lb. and 7 lb. of hay.

Expences. Average of seven years, 2 l. 16 s. 6 d.

Profit. Ditto, 6 l. 16 s. 9 d. part at 5 s. 9 d. per ton.

The turnep cabbage tried one year, the same culture as *Scotch*, weight 8 lb. Sheep eat them freely, but preferred the *Scotch*.

Mr.

Mr. *Scroope* at *Dalton*.

Soil. Some light loam on limestone, and black moory land.

Culture. The management, in every respect, the same as at *Danby*.

Product. The weight of each crop not minuted, but in general it was from 15 to 34 tons *per acre*; average 24.

Earl of *Darlington*, at *Raby*. *Scotch*.

Soil. Strong gravel and loam.

Rent, 16*s*.

Preparation. Some on paring and burning; others only a winter fallow.

Time. Plants from the end of *May* to the end of *June*.

Rows. Three feet, plants two.

Culture. Horse hoed twice, hand ditto once.

Product.	1766 --- 14 <i>lb.</i> <i>per</i>	<i>Tons</i>
	cabbage,	} 45

1767 --- ditto	45
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1768 --- 10 <i>lb.</i>	32
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Average 40 tons.

Used constantly for milch cows (the decayed leaves all taken off;) the butter particularly excellent, and none keeps better.

Mr.

Mr. Dixon at Belford. *Scotch.*

Soil. Clayey loam.

Rent, 15s. 6d.

Preparation. Winter fallow, and a dunging.

Time. Sows in *August*; transplants from middle of *March* to beginning of *April*.

Rows. Three feet, plants two.

Culture. Horse and hand hoed.

Product. The weight of all the crops not minuted, but that that is, is 15 *lb.* per cabbage, or per acre 48 tons. Uses them for milch cows; the butter very plentiful, and excellent; a loss of cabbages, the loss of the winter's butter.

Having thus brought all the intelligence concerning cabbages into one view, I must, in the next place, draw it into such averages as the nature of the subject requires.

In the first place the general produce must be discovered, and reduced to value in money. The only method of doing this will be to discover an average value per ton.

Average value per ton at *Kirkleatham*,

by fatting oxen, --- 8s. 6d.

Ditto Mr. *Scroope*, --- 5s. 9d.

Average, 7s. 1½d.

This

This must be our guide for valuing those crops of *Scotch* cabbage whose weight only is specified. They are as follow :

	Tons
Mr. <i>Middlemore</i> - - -	54
Mr. <i>Lyster</i> - - -	27
Mr. <i>Tucker</i> - - -	44
Mr. <i>Turner</i> - - -	39
Mr. <i>Crowe</i> - - -	35
Mr. <i>Smelt</i> - - -	18 *
Mr. <i>Scroope</i> - - -	37
Ditto at <i>Dalton</i> - - -	24
Earl of <i>Darlington</i> - -	40
Mr. <i>Dixon</i> - - -	48

Average 36 tons, which at 7s. 1½ d. is
12 l. 16 s. 6 d. per acre.

In addition to this average we must insert others that were not discovered by weight.

	£.	s.	d.
The Marquis of <i>Rockingham's</i> <i>Kentish</i> farm,	10	1	0
Medium of the crops at <i>Craikhill</i> ,	17	15	2

The general average of which three valuations is 13 l. 10 s. 10 d. per acre.

* It would be a great injustice to include Mr. *Dalton's*; one pound average proves sufficiently, that the soil, a shallow surface on a limestone, is absolutely improper.

It is here proper to remark, that this price must undoubtedly be under the real mark ; it is partly formed by a valuation of cabbages in fattening beasts at 7 s. 1 $\frac{1}{2}$ d. per ton ; but those who have been conversant in feeding cattle must be sensible, that a value taken from one application only *may* be under the mark : that *it is* so must strike every one who considers, that turneps, and other articles of food, will fat an ox, though not so well as cabbages ; but turneps will not feed sheep through the months of *March* and *April* ; and neither turneps nor hay will keep cows in plentiful as well as sweet milk all the winter : these two uses are peculiar to cabbages, and such an application of them must consequently make a greater return, than a use in which other species of food rival them.

Those who have been used to the enormous expence of wintering cattle on hay, will easily believe that 7 s. a ton for cabbages can by no means be an adequate price : the very proposition on comparison with hay is striking. And as to the turneps, the comparison is yet clearer. It before appeared, that the average value of turneps in the north of *England*, that is, the same country the cabbages are all cultivated in, is 3 l. 1 s. 6 d. per acre : now from the

VI attentive

attentive manner in which I viewed as well as weighed those at *Kiplin*, that fine and rich turnep soil, I was well convinced the average weight was not above five tons, which is better than 12*s.* *per* ton; now the superiority of cabbages to turneps is absolutely fixed by the preceding intelligence; those cultivators who think the contrary, bearing no proportion to their antagonists; consequently cabbages are of much more value than 12*s.* *per* ton, or probably double the amount I have calculated them at: which circumstance must certainly convince every one, that cabbages are, in these calculations, much undervalued: and for the use of such as may be of this opinion, I shall add the value of the average crop at more estimations.

	£.	s.	d.
Thirty-six tons at 10 <i>s.</i>	18	0	0
at 11 <i>s.</i>	19	16	0
at 12 <i>s.</i>	21	12	0
at 13 <i>s.</i>	23	8	0
at 14 <i>s.</i>	25	4	0

Had I been fortunate enough to have gained other clues to discover the value of cabbages, particularly in making butter for sale in winter, and spring feeding sheep and lambs, I have no doubt but the average sum would have been very high in this scale, if not exceeded the utmost of it.

But for want of other facts to calculate upon, I must make use of such as I possess.

In the next place I must compare the product with the rent of the land.

Mr. <i>Lyfter</i>	-	11 s.	27 tons
Mr. <i>Tucker</i>	-	45 s.	44
Mr. <i>Turner</i>	-	15 s.	39
Mr. <i>Crowe</i>	-	12 s. 6d.	35
Mr. <i>Scroope</i>	-	14 s. 9d.	37
Ditto	- - -	4 s. *	24
Earl of <i>Darlington</i>		16 s.	40
Mr. <i>Dixon</i>	- -	15 s. 6d.	48

Average rent, 16 s. 8d.

At and under 15 s. } 11 s. 5d. 32
rent average,

Ditto above 15 s. 25 s. 6d. 44

It appears from hence, that cabbages depend very much on being planted in a rich soil; and this is precisely the opinion of most of the preceding cultivators; as well as perfectly consistent with reason; for the plant is a most vigorous one, roots very strong and deep, and consequently is very well calculated for improving proportionably to the fertility of the soil.

Forty-four tons at 7s. 1½d. is 15 13 4

Thirty-two at ditto - - 11 8 0

Superiority of the former - 4 5 4

* Never yielded any thing, but I call it 4 s.

This

This comparison shews the great profit of applying the best land of a farm to the culture of cabbages; and it proves at the same time the advantage of manuring and fallowing well. I apprehend there are few more beneficial ways of applying manure than to this culture. But to carry this comparison the farther, I shall next state the soils and product.

On clays and strong loams.

Mr. Turner	-	-	-	39 tons
Mr. Crowe	-	-	-	35
Mr. Scroop	-	-	-	37
Earl of Darlington	-	-	-	40
Mr. Dixon	-	-	-	48

Average 39 tons.

On rich deep light loam.

Mr. Tucker	-	-	-	44
------------	---	---	---	----

On other inferior soils.

Mr. Middlemore	-	-	-	54
Mr. Lyster	-	-	-	27
Mr. Smelt	-	-	-	18
Mr. Scroop at Dalton	-	-	-	24

Average 30 tons.

The inferiority of the last to the two others shews how much the cabbages affect a rich soil; but at the same time the product on inferior soils proves clearly, that this admirable vegetable thrives to vast profit on all sorts.

Respecting the preparation for this crop, it has in general been by winter fallowing, and manuring as for turneps. But many of the trials had no manure.

The grand variation in *time* is the summer and spring sowing: the first is variously practised in the months of *August* and *September*; but chiefly in the former; the spring sowing is from the end of *February* to the end of *March*. The first sown are planted into the field in *April* and *May*; and the others in *June*. It is very difficult to draw an exact comparison between these times, for want of having the dates to all the trials; but I may in general remark, that the largest cabbages, and crops, are the winter ones. This was the case with Mr. *Turner's*; Mr. *Crowe's* are chiefly winter ones: Mr. *Tucker's* largest cabbages, and all Mr. *Dixon's*. It is true Mr. *Scroop's* are generally spring ones: I cannot assert the point; but I believe the ballance *in weight* lies in favour of the winter crop: I think also, that it stands to reason it should; for the plants having all the summer to increase in, may be supposed to grow to a larger weight than when planted so late as *June*; and the receiving the transplantation in the spring, which twenty to one is a wet season, must give a great superiority, upon

upon an average of years, over those planted at midsummer, which is probably a dry one.

But the comparison does not concern *weight* alone; *duration* is of equal, and in many cases of superior importance; we must run over the table, and see if any conclusions under this head can be drawn from it.

Spring sowing.

	<i>Duration.</i>
Mr. Middlemore -	April.
Mr. Lyster - -	Christmas.
Mr. Tucker - - -	End of March.
Mr. Ellerker - -	End of April.
Mr. Smelt - - -	Ditto March.
Mr. Scroop - - -	Beginning of May.

Summer sowing.

Mr. Tucker - -	{ Wants cutting before Christmas.
Mr. Crowe - -	May-day.

Several of the cabbage cultivators seasons of sowing not being minuted, the point is not decisive; but upon the whole I think the spring plants evidently last the longest; and let me, in addition to this, remark, that Mr. *Tucker* cultivating both, and finding the spring ones to last much longer than the others, is a very decisive circumstance; and I may further observe, that of the crops I viewed of Mr. *Turner's*,

the winter ones were so excessively large, and straitened over the heads, that I should think it a miracle if they lasted longer than *Christmas*, or at least than *January*: To reason upon the point, one cannot help concluding in the same manner; for it is well known that a cabbage holds but a short time in perfection, when at its full growth it bursts, and then the weather seizes it, and, if it is not too late in the spring for shoots to proceed from it, rotteness takes place. Whoever has observed the several species that are cultivated in gardens, must have taken notice, that the plants not near full grown are those which support the winter best. Upon the whole I shall venture to conclude, that the spring sown plants, upon an average, continue in use the longest.

Crops that require being consumed early in the winter, cannot be applied to the complete fattening of beasts; but must be used for finishing the fattening of those that have had the summer's grass, for which purpose, indeed, they are of admirable utility; they are also used for keeping lean cattle and milch cows, but not for sheep and lambs. This points out the proper conduct, which is to sow at both seasons, that the crop may be in use during the whole winter, and for all sorts of cattle.

The

The distance at which the cabbages are planted is another point that requires attention; it is necessary to examine whether any material effects seem to attend variations in this part of the culture.

	<i>Distance.</i>	<i>Tons.</i>
Mr. <i>Lyster</i> , - -	4 by 2 -	27
Mr. <i>Tucker</i> , -	4 by 2 -	44
Mr. <i>Turner</i> , -	4 by 2 -	39
Mr. <i>Crowe</i> , -	4 by 2 -	35
Mr. <i>Smelt</i> , -	4 by 2 -	18
Mr. <i>Scroop</i> , -	4 by 2 -	37
Dirto at <i>Dalton</i> , -	4 by 2 -	24

Average weight 32 tons.

Mr. <i>Middlemore</i> , -	4 by 1½ -	54
Earl of <i>Darlington</i> , -	3 by 2 -	40
Mr. <i>Dixon</i> , -	3 by 2 -	48

Average 47 tons.

This comparison carries some weight with it; and gives no slight reason to suppose that four feet distance of the rows is too much: But I do not pretend to make such an assertion from a comparison not experimentally made. I beg leave to recommend this point to the future attention of these spirited cultivators; to vary the distances in the same fields, season, and management; the following variations are perhaps such as may deserve the trial.

2 feet

2 feet square.

3 feet square.

4 feet square.

The Marquis of *Rockingham* last year had a field in three feet squares and horse-hoed across both ways. But I know not the result.

3 feet by 18 inches.

3 feet by 2.

3 feet by $2\frac{1}{2}$.

4 feet by 18 inches.

4 feet by 2.

4 feet by $2\frac{1}{2}$.

4 feet by 3.

5 feet by 2.

6 feet by 2.

A single season would decide the point: (like all comparative experiments) a few rows to each, under a perfect similarity of circumstances, would be more authentic than whole fields.

The article of culture while growing is very similar among all these gentlemen; all horse and hand hoe sufficient to destroy weeds, and pulverise the intervals. But in the point of watering there are variations. Mr. *Scroop* is, upon this head, positive that it is quite needless; he planted with great success in the middle of the drought of 1765, without watering. Mr. *Crowe* and Mr. *Turner* assert the same.

The

The Marquis of *Rockingham's*, Mr. *Ellerker's* and Mr. *Tucker's* are watered in dry seasons. This is a seeming contradiction, but easily reconciled; the first set of cultivators are of opinion the plants will do without it, consequently, as the practice is troublesome and somewhat expensive, it is well to omit it; the others may think that they will live without it, but suppose the benefit they receive from it is more than equivalent to the trouble and expence: and this I take to be the case between both parties; reasoning can never overturn facts; those which Mr. *Scroop* in particular brings in support of his opinion, are too strong to be overthrown; but then they certainly do not imply that watering in dry seasons would do no service.

I have already examined so much of the point of *duration* as depended on the time of sowing; but it is further requisite to add, that upon a general view of these excellent cultivators experiments, it clearly appears, that the *Scotch* cabbage will last in good perfection quite through the winter and spring, till the grass is ready to receive the cattle: This is not the case with every mode of culture, but it is evidently a quality in the vegetable, when managed with an eye to this effect: And I cannot help observing, that this circumstance is one of the most
important

important among the many favourable ones that attend this admirable vegetable.

Every one knows that turneps are totally inadequate to such a use. They begin to shoot very early in the spring, and after their tops have made but a little growth, their roots become sticky and of little value. During the last fortnight of *March* and all *April* but little dependence can be placed on their roots, for they will either be sticky in this manner, or rotten with the frosts; the green herbage is then the principal food they yield, and that is proper for sheep alone; but further, it is well known that no vegetable exhausts the soil more than turneps after they begin to run for seed, so that the farmers, who leave them for use at that season of the year, pay a vast price for the advantage they receive for them; if it is any thing of a warm forward spring, their barley crop, in all probability, is half ruined, and consequently the soil during the whole course much injured.

It is a fact that the *Scotch* cabbage is open to none of these evils; when planted at a proper season it resists the utmost severity of weather, even in high moors, that are too cold for most crops; nothing decays it but a premature growth and bursting; if it is backward enough to keep from that, no weather affects it: It is also a fact

fact that this backwardness is no injury to the crop; for the spring planters reap immense crops of them that last even to *May-day* in full perfection.

The importance of a spring food for all sorts of cattle, at a time when all other food except hay is gone, must be evident to every one; and greater still when we consider the quantity of the produce, as well as the duration of it. This grand point of spring food for cattle, is that which has received so much attention from all superior farmers in this age; and which the Society for the encouragement of arts, manufactures, and commerce, have so much promoted: The *Scotch* cabbage, from this continued register of numerous experiments, is proved to answer every purpose of spring feed, and that in a degree very uncommon with all the vegetables I ever heard of.

In respect of *product*, I have already considered it as to weight of crop; but it must here be examined in other points of view, particularly the cattle fed, that you may be convinced, that when I talk of *all sorts of cattle*, I do not much exaggerate.

Fattening

Fattening O X E N.

The following gentlemen's crops are applied to this, with great profit.

Mr. *Middlemore's*.

Mr. *Wharton's* two acres completely fat three large beasts: This is an immense produce.

Mr. *Tucker's*.

Mr. *Ellerker's* finishes beasts of eighty stone; oxen of 23 *l.* sold out of cabbages; an acre completely fats two of thirty-six stone (14 *lb.*) each.

N. B. The soil shallow, on a chalk-stone.

Marquis of *Rockingham's*.

Mr. *Turner's*. Improvement of an ox of eighty stone, fattening four months on cabbages, is, on an average, 5 *l.* 10 *s.*

Mr. *Crowe's*.

Those at *Craikbill*.

Mr. *Scroop's* oxen of an hundred stone, that have had the summer's grass, are finished and without delay, never going back in flesh (the case oftentimes with turneps) and improving faster than on any other food.

From these articles of intelligence it is sufficiently plain, that this cabbage is a most

most superior food for fattening oxen of the largest sizes. As to feeding young cattle, every one must at once be sensible, that a vegetable that will *fat* an ox, will undoubtedly *keep* a steer.

Feeding Cows.

Mr. *Lyfter's*.

Mr. *Tucker's* — But if kept constantly at cabbages, without any other food, the butter rank.

The Marquis of *Rockingham's*.

Mr. *Turner's*. The increase of one cow's milk from cabbages two quarts *per diem*; but it tasted.

Mr. *Hewett* of *Bilbam*. Butter, if used immediately, good; but will not keep twelve hours.

Mr. *Crowe's*.

Mr. *Smelt's*. The butter incomparable, and in vast quantities, not more in height of summer, and will keep a fortnight; but the cows must have no decayed leaves.

At *Craikbill*. With great success. Two cows in *January*, one that had lately calved, and the other to calve at *Lady-day*, produced in a week 17 lb. 10 oz.

Mr. *Dalton's* — But made the butter absolutely stink; attributed, however,

ever, to the decayed leaves not being taken off.

Mr. Scroop's. Cows fed with them to more advantage, six to one, than upon any other food, the milk being great in quantity, perfectly sweet, and the butter excellent; but the precaution must be observed, of picking off the decayed leaves.

Earl of Darlington's. Used constantly for milch cows. The butter particularly excellent, and none keeps better; but the decayed leaves are picked off.

Mr. Dixon's. The butter very plentiful and excellent. A loss of cabbages a loss of the winter's butter.

That cabbages will feed cows very fast, and make them give an immense quantity of milk, is a fact that has been disputed by none; the great point is the sweetness of the butter; and this I think appears equally clear from the preceding table. **Mr. Tucker** found the butter tasted when the cows had nothing to eat but cabbages; but this is no objection; for there exists not the smallest necessity of keeping them absolutely upon cabbages alone. It certainly must be more proper to give them portions of hay or good straw every day;

Besides,

Besides, it is not added, whether the decayed leaves were picked off, or not. This also is the case with the minute of Mr. *Turner's* experiments and Mr. *Hewet's*; we must certainly conclude that the decayed leaves were not picked off, which circumstance is registred of Mr. *Dalton's*; from all which we may venture to conclude, that the loose decayed leaves will give the butter a bad taste. But it is indisputable from Mr. *Smelt's*, Mr. *Scroop's*, Lord *Darlington's*, and Mr. *Dixon's* experiments, that the butter, with the precaution above mentioned, is excellent, and much superior to that from any other article of food; which must indubitably be agreed to, as the result of all the preceding intelligence on that head.

I cannot help pausing a moment to reflect on the prodigious consequence of a plant that yields such an immense quantity of a food, which keeps cows all winter in full milk! It is equalled by no other that has hitherto been known; and most certainly is an uncommon superiority attending this branch of culture.

Feeding SHEEP.

Mr. *Middlemore's*,
Marquis of *Rockingham's*,
Mr. *Turner's*,

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O

Mr.

Mr. Crowe's,

Mr. Smelt's,

Mr. Scroop's. Fat sheep are carried forward in great perfection, better infinitely than on turneps. Lambs of ewes fed on them have always proved uncommonly fine and strong.

From hence it appears as clear as possible, that no food excells this cabbage in quality for sheep: most certainly none at present known equals it in quantity; and the duration is undoubted.

Feeding SWINE.

Mr. Scroop's swine feed very freely on them, and are kept in very good condition, without other food.

Having thus examined the merit of this vegetable in feeding and fattening cattle, I shall next insert the minutes concerning the quantity eat: they are few, but are of great use in calculations of the proportion between cattle and food, whereby it is known what quantity of cabbages must be allotted to a given weight of beef.

Mr. Turner. An ox of eighty stone (14 lb.) eat 210 lb. in twenty-four hours, besides 7 lb. of hay.

Mr. Scroop. An ox of an hundred stone in twenty-four hours eat 168 lb. and 7 lb. of hay.

These

These proportions are nearly the same. It comes in the next place to examine the expences of cultivating this vegetable, taking the prices of labour as they are in the respective neighbourhoods.

SEED.

Mr. Crowe	- - - - -	0	0	6
Mr. Scroop	- - - - -	0	2	8
Average, 1s. 7d.				

PLANTING.

Mr. Middlemore 1s. per thousand, or at four feet by two, about	- - - - -	0	5	0
Mr. Lyster, six men an acre in a day, this we may call	- - - - -	0	9	0
Mr. Tucker, a man plants two thousand in a day,	- - - - -	0	3	9
Mr. Ellerker, a man plants an acre in three days, three by two, which at four by two is about two days	- - - - -	0	4	0
Mr. Turner	- - - - -	0	4	6
Mr. Crowe	- - - - -	0	5	0
Mr. Scroop	- - - - -	0	2	6
Average, 4s. 9d.				

WATERING.

Mr. Turner	- - - - -	0	2	11
	O 2	HORSE-		

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HORSEHOEING.

	£.	s.	d.
Mr. Turner - - - -	0	2	3
Mr. Crowe - - - -	0	1	3
Mr. Scroop (one horse) -	0	0	10
Average, 1s. 5d.			

HANDHOEING.

Mr. Crowe - - - -	0	4	0
Mr. Scroop - - - -	0	2	0
Average, 3s.			

HANDWEEDING.

Mr. Turner - - - -	0	5	0
Seed - - - -	£ 0	1	7
Planting - - - -	0	4	9
Horsehoeing - - - -	0	1	5
Handhoeing - - - -	0	3	0
0 10 9			

These expences are the extraordinary ones for cabbages: as to the ploughing, harrowing, and manuring, they are not peculiar, but common to all crops, and depend quite on the opinion of the farmer; the expence varies in proportion as the culture is good or bad. Other extra's, if used, are,

Pricking out - - -	£ 0	4	9
Watering - - - -	0	2	11
Hand weeding - - -	0	5	0

Gene-

General expences of all sorts are as follow with the undernamed gentlemen.

Mr. *Turner*, rent 15 s. £ 2 7 0

Mr. *Crowe*, rent 10 s. - 2 4 6

Mr. *Scroop*, rent 25 s. - 2 12 6

Average, 2 l. 8 s.

From this state of the culture of these gentlemen, it is evident that cabbages are not expensive, rent on an average of 20 s. an acre, and included, the whole expence is no more than 2 l. 8 s. which is under that of turneps on the same rented land. This is another, and no trifling argument, in their favour.

Lastly, we come to *profit* of the crop. The only general way of calculating it, is to state first the average product, and then the average expence, taking the average of rents :

Average product	-	-	£ 13 10 10
Mr. <i>Turner</i> 's expences, ex-	}		
clusive of rent		-	-
Mr. <i>Crowe</i> 's	-	-	1 12 0
Mr. <i>Scroop</i> 's	-	-	1 14 6
Average,	£	1 11 4	
Ditto rent	0	16 8	
		2 8 0	

which happens to be the same sum as the average rent of only three made it. This is exclusive of manuring. Many crops were

not manured; some only limed at a small expence, and none more than for turneps. It also includes one in the three who pricks out before planting at 5 s. expence.

Product	-	-	-	-	£	13	10	10
Expences	-	-	-	-	-	2	8	0
Clear profit <i>per</i> acre						11	2	10

Which sum is very considerable, and far beyond any thing that ever is gained from turneps. But as I remarked before, the valuation of the cabbages, from which the above product is gained, is so very low, that it is much under the truth. It was formed at a calculation of 7 s. 1½ d. *per* ton; but many reasons occurred for valuing them up to 14 s. if not higher; I shall therefore state the profit at several rates.

At 10 s. <i>per</i> ton.		Product	£	18	0	0
		Expences	-	2	8	0
		Profit	-	15	12	0

At 12 s.		Product	21	12	0
		Expences	2	8	0
		Profit	19	4	0

At 14 s.		Product	25	4	0
		Expences	2	8	0
		Profit	22	16	0

In

In addition to these remarks on the profit of cabbages, I should add, their vast utility in cleaning and ameliorating the soil, and preparing it for crops of corn. Mr. *Tucker's* oats after them is a strong proof of this; ten quarters *per* acre the first crop, and eight the second, without a fallow intervening, proves sufficiently that cabbages had a surprizing effect even in enriching the land, for they were prepared for only by a winter fallow. Mr. *Turner* also found, that they prepare excellently for spring corn, and upon a comparison of them in this respect with turneps, were found to be vastly superior. Mr. *Scroop's* intelligence likewise proves the same thing; and it is to be observed, that this comparison is not made with the common unhoed *Yorkshire* turneps, as both those gentlemen hoe very completely.

Upon the whole, I may venture to recommend the culture of this excellent vegetable to all the rest of the kingdom, under the firm conviction that it will vastly more than equal all the expectations that can be reasonably formed of it: for several circumstances unite to render it uncommonly beneficial.

First. The *Scotch* cabbage is raised on all soils, even so low as 1 s. 6 d. an acre,

are, that have any depth: it rejects none but very shallow ones on a rock.

Second. It most affects clays, strong loams, and all very strong rich soils, that is, such as turneps cannot be cultivated on: the farmers of these soils are under a prodigious disadvantage in being obliged to winter their cattle on hay; there are none of them but are unhappy for want of turneps, envy their neighbours every acre of turnep land, and even cultivate that root on soils totally improper for it: whereas cabbages will supply their place on such soils, and yield the clay and clayey loam farmers five times the profit that is ever gained by their brethren from turneps: This is an advantage of a most peculiar nature, and highly worthy of the attention of all gentlemen in clay and loam countries.

Third. Cabbages are a crop that may be depended upon much more securely than turneps: the seed, with proper management, scarce ever fails; it is sown at a season that

that secures it; and all these experiments prove, that they never fail in the transplantation; even without watering and in droughts. Of all the crops on some hundred acres that these gentlemen have constantly cultivated, for seven or eight years, not one acre ever failed, which is saying much in favour of the vegetable. Turneps are often destroyed by the fly, and frosts early in winter.

These circumstances, among many others already mentioned, cannot fail of rendering the culture of the *Great Scotch* cabbage an object of vast importance to *Britain*.

As to the experiments on other sorts of cabbages, they may be drawn into one point of view, in a very small compass.

TURNEP CABBAGE.

Mr. Middlemore	-	-	19 tons.
Mr. Dalton	-	-	12
Mr. Scroop	-	-	19
Average 17 tons.			

Mr. Dalton found that sheep were very fond of them. Mr. Scroop found that they eat them freely, but preferred the *Scotch*:
That

That gentleman's trying them upon the same soil, and in the same manner, and finding them so much inferior, appears to be very decisive, on comparison, in favour of the *Scotch*.

BATTERSEA.

Mr. *Middlemore* cultivated this sort to forty-two tons *per acre*.

ANJOU.

Good for nothing with both Mr. *Turner* and Mr. *Scroop*.

RUSSIA.

In Mr. *Scroop*'s trial of comparison in 1759, this was larger than any, but did not stand the winter well.

R. E. D.

This, in the above comparison, was in value next to the *Scotch*.

SAVOYS.

This, in the same trial, in rows four feet asunder by one in the rows, came to 5 *lb.* at an average, or twenty four tons *per acre*, which is a considerable produce. Cattle liked them very well, but they would not stand the winter.

I can-

I cannot conclude this review of the cabbage culture, without expressing my wishes, that these truly spirited farmers should continue it; and if they will favour me with the effect of future trials, and these sheets should see a second edition, I would readily insert each article in its proper place, and again calculate all the averages. And this, I should add, would, in all other cases, be the means of advancing this work to a greater perfection than otherwise it can arrive at.

I remain, &c.

LET-

LETTER XXIX.

HAVING proceeded thus far in the review of arable crops, I shall next examine the culture of the most common of the artificial grasses, Clover, which in some counties makes so great a figure in the courses of crops. It is absolutely necessary to discover the value of all crops, before we attempt to reason on the grand system of political economy, and to know the extent of country that cultivates those vegetables which are common in some places, but not general.

From *Woolburn* to *Newport-Pagnel*, at *Broughton*.

Soil. Very good, at 20s.

Product. Never mow it. Feed sheep; fats an ox in spring, with a little ray grass, better than natural grass.

Stamford to *Grimsthorpe*, *Byten*.

Soil. Clay, and gravelly loam, 4s.

Culture. Sow it over wheat in the spring, and harrow in wheat after it.

Product. Mow it twice for hay.

Colster-

Colsterworth to Grantham.

Soil. A loamy gravel, 10s.

Culture. Mix some ray grass with it; sow both on barley and wheat.

Product. Mow once, one load and a half of hay *per acre*.

Newark to Tuxford.

Soil. A rich sandy gravel, at 15s.

Product. At two cuttings three loads of hay.

Sheffield to Barnsley.

Soil. Clay, 12s. 6d.

Culture. Sow on spring corn.

Product. At two mowings three loads of hay.

Leeds to Tadcaster.

Soil. A strong blue clay, 8s. 6d.

Culture. Sow on wheat and barley.

Product. On one mowing near three loads of hay *per acre*.

York to Barnby-Moor.

Soil. Sandy, loam, and clay, 15s.

Culture. Sow it on their barley lands; wheat after it.

Product. Mow it twice for hay, four loads at the two.

About Risby. Clover unknown.

Mr. Ellerker at *Risby*. Clover of incomparable use both in mowing and feeding; wheat after it on one earth.

At

At *Stillingfleet*.

Soil. Clay and sand, 14 s.

Culture. Sow on barley.

Product. At two mowings two ton of hay.

About *Howden*.

Soil. Clay, at 15 s.

Product. Two tons of hay at a mowing.

Marquis of *Rockingham's Hertfordshire* farm.

Soil. Clay and hazle mould.

Culture. On barley, and harrowed in in the spring on wheat.

Product. Mows twice for hay, three tons *per* acre, valued at 1 l. *per* ton.

Marquis of *Rockingham's* experiments on time of sowing, tried thrice in autumn, without corn, and failed, notwithstanding it was in the same field, and consequently unusually fallowed.

Around *Wentworth-house*.

Soil. Clay and loam, at 8 s.

Product. Mow twice; three tons of hay at the two. No crop whatever answers better; the wheat better after that which is mown than after that which is fed.

***Beverley to Driffeld*.**

Soil. Clay, at 10 s.

Product.

Product. Mow it twice, three loads of hay, sow barley after it.

Sir Digby Legard.

Soil. Light loam on lime-stone. Wold land, 1 s.

Product. Twenty shillings *per* acre.

About *Brumpton*.

Soil. A rich loam upon a lime-stone, at 14 s.

Culture. Sow it with barley, oats, and wheat.

Product. Mow it for hay, two tons and a half *per* acre.

Yeddingham-bridge.

Soil. Sandy, 6 s. 6 d.

Product. Mow it for hay, two tons and a half at the first cutting.

East Newton.

Soil. Loams and clays, and lime-stone land, 12 s.

Culture. Sow with barley or oats; and wheat after it on that land that used to yield nothing but rye.

Product. Four tons of hay at two mowings.

About *Nunnington*.

Soil. Limestone land, 6 s. 3 d.

Product. Mows the first crop, two tons of hay.

Mr. Turner at Kirkleatham.

Soil. Clay, 8 s.

Product.

Product. In hay and feed 4*l.* 4*s.*
per acre.

At *Schorton*.

Soil. Clay and gravel. at 10*s.*

Product. Sixteen *cwt.* of hay at one mowing. They get no more, on account of feeding it with sheep late in the spring.

About *Rookby* they know nothing of clover.

Very little known about *Kiplin* and *Swinton*.

Sleningford sometimes sown.

Soil. Shallow on limestone, 8*s.*

Product. 30*s.* per acre.

About *Danby*.

Soil. Gravelly clay, and loam, 12*s.* 6*d.*

Product. Three tons of hay; wheat after it: better after mowing than after feeding.

About *Raby-Castle* nothing known of clover; nor at *Gosworth*, near *Newcastle*.

About *Morpeth*.

Soil a loamy clay, at 12*s.*

Product. Mow for hay; a ton and three quarters per acre; oats after it.

No clover at *Alnwick*.

At *Hetton*, near *Belford*.

Soil. Light loams, and moory soils,
6*s.* 6*d.*

Product.

Product. Both mow and feed it; if the former, a ton and half *per* acre.

Fenton, near *Wooller*.

Soil. Sandy loam, 11 s. 3 d.

Product. Two tons of hay; oats after it.

About *Glenwelt*.

Soil. Sand, gravel, and clay, 12 s. 6 d.

Product. Mow it twice, two tons and a quarter. Wheat after it.

South of *Carlisle*.

Soil. Loam, gravel, and clay, 15 s.

Product. A ton at a mowing.

About *Penrith*.

Soil. Various, 15 s.

Product. Two tons of hay *per* mowing.

About *Keswick* they know nothing of it. From *Kendal* to *Burton*.

Soil. Light loam on a limestone, 21 s.

Product. Fifteen *cwt.* the first mowing; eleven *cwt.* the second.

Around *Ormskirk*.

Soil. A sandy loam, 15 s.

Product. Great crops; reckoned more profitable than corn.

About *Altringham*.

Soil. Loam and sand, 20 s.

Product. Two tons *per* acre at one mowing.

About *Knotsford*.

Soil. Clay and sand, 16s.

Product. Two tons and a half the first mowing, and one ton the second.

Around *Stone*.

Soil. A sandy loam, 16s.

Product. A ton and a half at a mowing.

Rudgeley Bridge to Litchfield.

Soil. Light, sandy, and gravelly, 15s.

Product. Mow it once; two tons of hay.

Aston, near Birmingham.

Soil. Sand, 17s. 6d.

Product. Mow it once, a ton and a half.

About *Hagley*.

Soil. Light loams, sand, and cold clays, 20s.

Product. Mow the first crop; three tons hay.

At *Bensington*.

Soil. Gravel, sand, clay, 25s. 6d.

Product. Mow once, two tons.

North Mims.

Soil. Clays, and pebbly gravels, 12s.

Product. Mow twice for hay; two loads three quarters *per* acre, at two mowings.

The

The only way to strike an average of these products, will be to state that of one mowing, as there are variations in the number. Clover universally yields two crops, which may be mown, only they find that in several places it is more profitable to feed one of them. Where there is a difference minuted between the produce of the first and second cuts I shall take the average of the two. I add the rent, to make the view more complete.

	Rent	Tons	Cwt.
Colsterworth to } Granttham, }	10 s.	1	10
Newark, &c.	15 s.	1	10
Sheffield, &c.	12 s. 6 d.	1	10
Leeds, &c.	8 s. 6 d.	2	15
York, &c.	15 s.	2	10
Stillingfleet,	14 s.	1	10
Howden,	15 s.	2	10
Marq. of Rock- } ingham, }	-	1	10
Around Went- } worth, }	8 s.	1	10
Driffeld,	10 s.	1	10
Brampton,	14 s.	2	10
Yeddingham,	6 s. 6 d.	2	10
East Newton,	12 s.	2	0
Nunnington,	6 s. 3 d.	2	10
Danby,	12 s. 6 d.	1	10
Morpeth,	12 s.	1	15
	P 2	Hepton,	

	Rent	Tons	Cwt.
Hetton, - -	6 s. 6 d.	1	10
Fenton, - -	11 s. 3 d.	2	0
Glenwelt, - -	12 s. 6 d.	1	0
Carlisle, - -	15 s.	1	0
Penrith, - -	15 s.	2	0
Burton, &c. - -	21 s.	0	13
Altringham, - -	20 s.	2	0
Knotsford, - -	16 s.	1	15
Stone, - - -	16 s.	1	10
Rudgley Bridge, - -	15 s.	2	0
Birmingham, - -	17 s. 6 d.	1	10
Benington, - -	25 s. 6 d.	2	0
North Mims, - -	12 s.	1	5

Average one ton 13 cwt. per mowing per acre, or three ton 6 cwt. at the two mowings; which is a very considerable product, and shews, I apprehend, that this grass is in few places managed improperly: The rents are generally high, consequently but few poor soils come into the account. It is needless to throw the scale into distinct averages according to rent, because a slight examination shews that the variations would be so great, that no conclusions could be drawn from it; there are but few low rents, and their produce is near as great as most.

From the other particulars of the intelligence, the value of this excellent vegetable is sufficiently displayed.

About

About *Ormskirk* it is reckoned more profitable than corn; and at *Wentworth* the farmers think that nothing exceeds it. Mr. *Turner's* crops at 4*l.* 4*s.* per acre; and Sir *Digby Legard's* of 20*s.* upon twelve-penny wold land; all shew that this grass is uncommonly profitable.

Several considerable tracks of country in this route do not possess it; but upon the whole the culture is more common than I expected.

It appears, that wheat sown after the clover mown, is superior to that which succeeds the crops fed.

In several of these places it is the custom to sow oats after it; this is a bad practice; for when the clover is fine, wheat may almost universally exceed it. Witness the poor thin rye soils at *East Newton* converted into wheat ones by this grass.

LETTER XXX.

I Shall in this letter review the experiments I minuted on several other vegetables besides cabbages, that are not commonly cultivated. Of these Lucerne claims the first attention.

Mr. *Bramstone at Wooburn.*

Soil. Very loose, black, rich sand.

Culture. Broad cast; drilled at eighteen inches, and transplanted at two feet.

Product. The broad cast yields most at first; but it is apprehended that the drilled will exceed it, and that the transplanted will last longer than either.

Mr. *Middlemore at Grantham.*

Soil. A red sand.

Culture. A rood transplanted in rows, two feet six inches, in *March* 1767, I found it over-run with weeds. Two acres, three roods, broad cast, seven years old. Cleaned by harrowing.

Product. The transplanted cut once in 1767, and twice or thrice in 1768.

1768. The broad cast always cut three times a year. Often made into hay, a load an acre at each cutting. An acre lasts three horses at soiling the summer through; this, at six months the summer, and 2s. 6d. a week per horse, amounts to 9l. 15s. per acre. All sorts of cattle fed with it, but none affect it so much as horses.

Mr. *Lyster* at *Bawtry*.

Soil. A light sand.

Culture. Drilled five years ago in rows two feet asunder.

Product. Used for soiling horses, but inferior to clover or natural pastures.

Mr. *Turner* at *Kirkleatham*.

Soil. A rich loam.

Culture. Half an acre drilled in 1765, in equally distant rows ten inches asunder. Kept clean from weeds by hand hoeing.

Product. In 1766 cut five times, in 1767 five, in 1768 four. Maintains at the rate of four cows per acre through the summer, which, at six months, and 2s. per week per cow, is 10l. 8s. per acre.

Mr. *Dalton* at *Sleningford*.

Soil. Shallow loam on lime-stone rock. Rent at 8s.

Culture. Drilled in 1765, equally distant rows, six inches asunder.

Product. Cut three times in 1765, the same in 1766 and 1767. Not comparable to sainfoine, nor equal to clover.

Mr. *Scroop* at *Danby*.

Soil. A cold wet gravel, and a rich black loam, at 25 s.

Culture. Drilled half an acre in 1761, the first soil; but the plants all died the second year. In 1766 drilled seven rows, containing one rood eleven poles, equally distant four feet on the second soil. Twice horse and twice hand hoed each year.

Product. Cut twice the first year. The first maintained four coach horses and five calves six weeks; the second kept seven horses a month. In 1767 it was cut three times, and maintained seven horses from the middle of *May* to the end of *September*. In 1768, six horses the same time. It saved 12s. 10d. a week in hay for these six horses; the proportion for the seven, last year, is, therefore, 14s. 11d. and the average 13s. 10½d.

The

The product, therefore, of these two years is this,

Twenty weeks, at } 13*l.* 17*s.* 6*d.*
13*s.* 10 $\frac{1}{2}$ *d.* -

This *per* acre is - 43*l.* 8*s.* 11*d.*

This is a prodigious product, and I think much higher than the culture was ever before carried to.

Mr. Penny at Bendsworth.

Soil. Sandy loam, at 21*s.*

Culture. Two acres drilled in 1761, in equal distant rows, twelve inches asunder. Hand hoed well for three or four years, and afterwards breast ploughed twice a year.

Product. In foiling horses, 16*l.* 12*s.* *per* acre.

Expences. Hand hoeing, 40*s.* *per* acre. Breast ploughing, 5*s.*

From these several minutes we must, in the next place, draw an average of the whole. The product is the principal point.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
Mr. Middlemore, <i>per</i> acre,	9	15	0
Mr. Turner, - - -	10	8	0
Mr. Scroop, - - -	43	8	11
Mr. Penny, - - -	10	12	0
Average, 20 <i>l.</i>			

This

This is a vast product, and certainly proves, in a very clear manner, the surprising excellencies of this vegetable.

The soil it requires to be in perfection appears clearly in the above table, for that of the latter three is very rich and deep; and Mr. *Scroop's*, which yields so much, the superior product, one of the blackest, richest, moist, crumbling loams I ever met with — the true *putre solum*. The great importance of an extreme rich soil to the culture of lucerne is, therefore, extremely evident; and it is equally plain that no use can pay better, if so well, as applying it to lucerne. Considering the smallness of the expences, Mr. *Scroop's* crop far exceeds the profit of most hop gardens.

In respect to manner of sowing, the broad cast is the least crop: Mr. *Scroop's* four feet rows the greatest, Mr. *Penny's* and Mr. *Turner's* much the same, viz. one foot and ten inches. But the superiority of Mr. *Scroop's* soil prevents our concluding absolutely that his distance is the most beneficial.

BURNET.

THE experiments I met with upon this grass were not numerous, but several of them are of too much importance to be passed over in this review.

Mr.

Mr. *Searancke*, at *Hatfield*.

Soil. An upland gravel.

Culture. Sown by itself after a complete fallow and manuring with sainfoine; and also with oats. Kept clean for a year by hand work.

Product. A load and quarter of hay at two mowings, from the first; and a load and half from the last. For hay it is a nothing; but good for cows, making fine butter; and also very early for sheep. It stands the rigour of the severest winter without being damaged.

Mr. *Sisson*, at *Casterton*.

Soil. Light sandy land.

Culture. Sown in May 1767, mown in July.

Product. Twenty-three bushels seed per acre.

Mr. *Hewett*, at *Bilham*.

Soil. A fine light hazel mould.

Culture. Sown in drills two feet asunder, and kept perfectly clean two years.

Product. No cattle whatever would eat it unless absolutely forced by hunger. One acre of seed 4 $\frac{1}{2}$.

Mr. *Dalton*, at *Sleningford*.

Soil. Shallow light loam on limestone, at 8s.

Culture.

Culture. Sowed five acres in 1767 with barley, 20 *lb.* *per* acre.

Product. Fed down the first spring by forty sheep three weeks in *April*, after which it stood for hay, and yielded a large cart load *per* acre; very good, and eat freely by the cattle.

From these trials it appears clearly, that burnet will certainly abide the winter's frost, yield plenty of green feed for sheep early in the spring, that cows will feed on it, and that the milk is fine.

That horses feed on it both green and in hay.

These conclusions are relative to certain soils, for on others it seems to appear that no cattle will touch it: This must arise either from a diversity of soil, or some unrelated circumstances. This point of cattle not feeding on burnet is not so clear as I could wish: And yet I have no doubt about it in my own mind: Few articles of green food are more beneficial than clover, and yet those very horses which, when accustomed to it, will fatten on it, will not touch it at first turning out until every sprig of natural grass around the borders is eat up. The preceding trials prove indubitably that sheep, horses, and cows *will* feed and thrive on it.

SAINFOINE.

THIS grass is a common crop in many counties of this kingdom, but as several of the articles of intelligence concerning it are experimental, I shall treat of it here as I have done with the preceding grasses.

Mr. Hewett at Bilham.

Soil. Fine hazel mould on limestone.

Culture. Sows it with half a crop of barley after a fallow, or turneps, four bushels of seed *per* acre. Lasts twelve or fourteen years.

Product. After the first year always mows the first growth for hay, 50 *cwt.* *per* acre, at 30*s.* a ton.

Sir George Strickland, at Boynton.

Soil. Light wold land at 2*s* 6*d.*

Product. Improves the land to 22*s.* 6*d.* *per* acre.

Sir Digby Legard, at Ganton.

Soil. Light thin wold land, at 1*s.*

Culture. Drilled one foot asunder.

Product. A ton an acre of hay: Improved to be well worth 10*s.* *per* acre.

Mr. Dalton, at Sleningford.

Soil. Thin loam on a limestone, at 8*s.*

Culture. In 1764 sowed twelve acres after turnep, alone—and carefully weeded.

Product.

Product. Mows it once every year; it produces as much hay *per* acre as any three of natural grass in the neighbourhood.

About Benfington.

Soil. Light chalk.

Culture. Sow a sack full of seed *per* acre, lasts fifteen years.

Product. Mown once every year: 55 *cwt.* of hay *per* acre, the second crop fed off with lambs.

These trials all prove the great excellency of this grass. The great improvement made by it on the poor wold lands by Sir George Strickland and Sir Digby Legard is a striking instance; Mr. Dalton's is also worthy of much notice. The products in weight are

	<i>Tons.</i>	<i>Cwt.</i>
Mr. Hewett, -	2	10
Sir Digby Legard, -	1	0
About Benfington. -	2	15
Average, 2 tons, 1 <i>cwt.</i>		

From this state of the Sainfoine culture I cannot help remarking how much the vast tracks of poor light dry soils in this kingdom, call for so cheap and great an improvement: There are many very extensive wastes in the north of *England* admirably adapted to this culture, and yet how few have the spirit to set about even this cheap

cheap and easy improvement! The poor soils on which this grass is the greatest improvement, are not worth cultivating in any other manner: the common wold husbandry is a proof of this. The yielding food for sheep is not a comparable produce to rich crops of excellen hay, and after-feed; but nothing speaks this clearer than their letting only from 1 s. to 4 s. an acre, and being raised by sainfoine to 10 s. and 25 s.

CARROTS.

THIS excellent root is not so universally known as a food for cattle, as it well deserves: The experiments I met with upon it are not numerous, but some of them are very valuable.

The Duke of *Bedford* finds them of great use for winter feeding large stocks of cattle and deer. Soil, a sand,

Gardeners at *Sandy*.

Soil. A rich deep fine sand, at 3 s. 10 s.

Culture. Sow at *Lady-day* on one spit digging; hoe very carefully three times; leave them from eight to ten inches asunder.

Product. Two hundred bushels per acre, at 2 s.

Ex-

Expences. Digging, 1 *l.* Seed, 8 *s.*
Sowing, 6 *d.* Raking, 4 *s.* Hoe-
ing, 1 *l.* 5 *s.* Digging up, 10 *s.*

Parsnips these gardeners also cultivate in the same manner, but the crop never equal to that of carrots by fifty or sixty bushels.

Mr. *Lyſter* at *Bawtry*.

Soil. A very light sand.

Culture. No hoeing, but hand weed-
ed.

Produce. They are found to be of
incomparable use in feeding hogs.

Duke of *Norfolk*, at *Worksop*.

Soil. A light sand.

Culture. Hoes and weeds thoroughly.

Product. They answer incomparably.

Mr. *Hewett*, at *Bilham*.

Soil. A fine light hazel mold, a foot
deep.

Culture. Sowed during four years in
drills one foot asunder, the middle
of *April*; four pound and half of
seed *per* acre; horse hoed thrice,
and hand weeded once. Left at the
distance of six inches in the rows.

Product. Six hundred and forty bu-
shels *per* acre, 32 *l.* at 1 *s.* *per*
bushel. Beasts fattened on them and
turneps, which evidently preferred
the carrots so much, that it was
soon

soon difficult to make them eat the former at all. Six horses kept on them through the winter without oats; they performed their work as usual, and looked equally well. A lean hog was fatted on carrots in ten days time, eat nothing else, and the fat very fine, white, and firm, nor did it boil away in the dressing; he ate fourteen stone. Hogs in general feed on them with great eagerness.

Mr. Turner, at Kirkleatham.

Soil. A black rich sand: and a white poor one.

Culture. Six acres were sown in 1767, summer fallowed and sown broadcast the beginning of *April*, hand weeded four times, and also hand hoed; but the crop left within three or four inches of each other.

Product. The size in the black sand from six to eight inches long, but less than a man's wrist. In the white five inches long, and less than the other. Fed milch cows and hogs, the first very fond of them, and their milk received no

ill taste from them. Several hogs of six stone (14 lb.) were fattened on them. No pork could be finer. They fattened quick and exceedingly well. The carrots given raw.

Expence. Weeding, hoeing, and taking up, 2 l. 10 s. per acre.

Mr. Scroop at Danby.

Soil. The rich fine black loam.

Culture. Drilled in single rows four feet asunder; horse hoed thrice, but left thick in the rows.

Produce. Very fine; eighteen inches long, and eleven in circumference.

Given to hogs, who fattened so well upon them, that a few pease finished them, and the fat was very fine and very firm.

Mr. Wilkie, of Hetton.

Soil. A light loam.

Culture. Sows the end of *March*; hoes them twice, to the distance of five inches.

Product. Grow to the size of a man's wrist, and twelve inches long. All cattle are very fond of them, particularly hogs.

These

These minutes clearly prove the great importance of the culture: The products, drawn into one view, are as follow:

	£.	s.	d.
<i>Sandy</i> gardeners, at 2 s. per } bushel, 200 }	20	0	0
<i>Mr. Hewett</i> , 640 bushels, } at 1 s. }	32	0	0
Ditto at 2 s. - - -	64	0	0

I think it fair to add the last valuation, as it is the actual one of the first inserted; nor do I think 2 s. an extravagant price: The average is 38 l. 13 s. Rejecting the last price it is 26 l.

In the use of them several very important facts appear in the preceding intelligence. *Mr. Lyster's*, *Mr. Turner's*, *Mr. Hewett's*, *Mr. Scroop's*, and *Mr. Wilkie's* experiments all prove, that carrots raw are of incomparable use in both feeding and fattening hogs; the particular instances of fattening them quick and well, are extremely valuable. It also appears from *Mr. Turner's* trials, that they are very fine food for milch cows, giving the butter no bad taste. *Mr. Hewett's* intelligence shews, that oxen fat to much advantage on them, and that they completely supply the place of oats to horses.

There are several other articles of culture not common, that are registred in different parts of the minutes of the journey; but as most of them are very much confined to single spots, no averages can be drawn from them, and consequently there is no use in reviewing them here. I shall therefore for the present conclude myself, &c.

LET-

L E T T E R XXXI.

I WAS throughout the journey attentive to discover the quantities of seed every where sown, which is of consequence not respecting the crop alone, but in a general political view of the growth and consumption of corn. I shall here lay before you a table of the Quantities used of Wheat, Rye, Barley, Oats, Pease, and Beans, and then draw from them such averages as they admit, and trouble you with those observations on the result which happen to strike me on the subject.

Pease and beans mixed I shall call pease.

Places.	Wheat.		Rye.		Barley.		Oats.		Pease.		Beans.	
	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
1. Hatfield to Wetwyn,	2 $\frac{1}{2}$	25			4	32	4	32	4	20		
2. Around Stevenage,	2 $\frac{1}{2}$	23			4	36	4	36	2 $\frac{1}{2}$	17	2 $\frac{1}{2}$	20
3. Stevenage to Luton,	2 $\frac{1}{2}$	15			4	24	4	12	4	17		
4. Dunstable to Wooburn, Houghton,	2	15			3	23	2 $\frac{1}{2}$	28	3	32	2 $\frac{1}{2}$	25
5. Ditto, Mil- ton,	2	20			2	24	4	32	4	24		
6. Wooburn to Newport Pagnel,	2	24			4	24	4	24	4	20		
7. Broughton,	2	25			5	40	5	36	4	20	6	20
8. Newport to Bedford, Apswick,	2	15			4	28	4	18				
9. Biddenham,	2	22			4	24	4	24	2 $\frac{1}{2}$	20	2	24
10. St. Neot's to Kimbolton,	2	15			4	24	4	16	4	12	4	15
11. Kimbolton to Thrapston,	2	24			4	32					4	24
12. Casterton,	2 $\frac{1}{2}$	20			4	32	4	40	3	20		
13. Stamford to Grimsthorp,	4	20			5	16	3	16	3 $\frac{1}{2}$	16		

Grantbam

Places.	Wheat.		Rye.		Barley.		Oats.		Pease.		Beans.	
	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
14. <i>Grantham</i> } to <i>Newark</i> , }	2	27			4	27					4	20
15. <i>Newark</i> } to <i>Tuxford</i> , }					4	32	4	32	3 $\frac{1}{2}$	24	4 $\frac{1}{2}$	24
16. <i>West Drayton</i>					3	36	5	40	3	24	4	20
17. <i>Bawtry</i> to } <i>Doncaster</i> , }	3	16	2	16	3	28	4	24	3	14		
18. <i>Doncaster</i> } to <i>Rotherham</i> , }	3	20			4	32	4	32			4	18
19. <i>Sheffield</i> to } <i>Barnsley</i> , } <i>Ecclesfield</i> , }	2 $\frac{1}{2}$	20			3 $\frac{1}{2}$	32	5	32	3	20	3 $\frac{1}{2}$	30
20. <i>Woolley</i> ,	2	22			4	28	4	40	3	15	3	18
21. <i>Leeds</i> to } <i>Tadcaster</i> , }	3	19			4	32	4 $\frac{1}{2}$	40	3	14	4	26
22. <i>York</i> to } <i>Barnby-moor</i> , } <i>Wilbersfort</i> , }	2 $\frac{1}{2}$	30	2	25	3	35	4	55	4	17	4	17
23. <i>Do. Hatton</i> ,	2	17	2	20	3	15	4	32	2	10	3	24
24. <i>Risby</i> ,	2	21			3 $\frac{1}{2}$	38	3 $\frac{1}{2}$	36	3 $\frac{1}{2}$	16	3 $\frac{1}{2}$	30
25. <i>Stillingfleet</i> ,	3	24	2 $\frac{1}{2}$	24	3	24	5	32			5	22
26. <i>In Holdernefs</i>	2	32			3	40	4	40			3 $\frac{1}{2}$	32
27. <i>Howden</i> ,	2	24	3	24	4	32	4	40			3 $\frac{1}{2}$	20
28. <i>Thorne</i> ,	3	24			4	36	4	48			3 $\frac{1}{2}$	23

Places.	Wheat.		Rye.		Barley.		Oats.		Pease.		Beans.	
	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
29. Marquis of Rocking- ham's Ken- tish Farm,	2½	32			4	40	4	32	3½	23	3	40
30. Ditto Hert- fordshire,	2½	18			4	32	5	40	2½	20	2½	32
31. Around Wentworth,	2½	27	2½	24	3	40	4	36	3½	24	4½	18
32. Driffield,	2	24			3	28	4	16	3	24	4	28
33. Around Ganton,					3	9	4	12				
34. Brumpton,	2	20			2	32	4	24				
35. Yeddingham,	2½	28	1½	28	2	40	2½	40	2½	15	4	24
36. East Newton,	3	24	3	20	4	28	4½	32	1	16	4	16
37. Nunnington,	2½	16	1½	28	2½	24	4	30	2½	16	5½	24
38. Kirkleatham,	2	25			2	40	4	40	4½	30		
39. Gilsdale,	2	20	1½	28		4	40					
40. Mr. Turner,	1	20			1	32	4½	45				
41. Schorton,	2	20	2	25	2	32	4	40	2	16	4½	20
42. Richmond to Greta- bridge, Gil- ling,	2½	25	2½	40	3	45	5	45	3	16	5	25
43. Rookby,	2½	16	2	40	3	25	5	33	2	17		
44. Kiplin,	2	21	2	27	2½	32	3	30	3	20	4	30

Mr.

Places.	Wheat.		Rye.		Barley.		Oats.		Pease.		Beans.	
	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
45. Mr. Crowe,	2	32					3 $\frac{1}{2}$	56	4	32	4	30
46. Swinton,	2 $\frac{1}{2}$	20	2 $\frac{1}{2}$	20	3	20	4 $\frac{1}{2}$	24	2 $\frac{1}{2}$	24	4 $\frac{1}{2}$	24
47. Craikbill,	2 $\frac{1}{2}$	20			2 $\frac{1}{2}$	28	4	30	2	30		
48. Sleningford,	2	15			2 $\frac{1}{2}$	20	4	24	3	12		
49. Danby,	2 $\frac{1}{2}$	22	2	45	2 $\frac{1}{2}$	32	4	35	4	32	4	22
50. Mr. Scroope,					2	40	3 $\frac{1}{2}$	50			3	31
51. About Raby-castle,	2	25	2 $\frac{1}{2}$	40	2 $\frac{1}{2}$	35	4	40	2 $\frac{1}{2}$	30		
52. Earl of Darlington,	2	33			2	45	4 $\frac{1}{2}$	45				
53. Gosworth,	2	16	2	30	2 $\frac{1}{2}$	30	4 $\frac{1}{2}$	30				
54. Morpeth,	2 $\frac{1}{2}$	14	2	20	2	20	5	30	2	14	3	28
55. Alnwick,	2	20	2	20	2	40	6	40	3	20	5	45
56. Belford,	3	21			4	40	6	48	4	25	6	60
57. Hetton,	2	10			3	24	6	30	4	15	3 $\frac{1}{2}$	18
58. Fenton,	3	24	2	30	3 $\frac{1}{2}$	28	6	40	3 $\frac{1}{2}$	20		
59. Rothbury,	2	18	2	20	3	24	6	50	2	10		
60. Gambo,	3	24	3 $\frac{1}{2}$	18	4 $\frac{1}{2}$	35	7	50				
61. Glenwelt,	3	30	2 $\frac{1}{2}$	35	3	32	6	90	5	15	5 $\frac{1}{2}$	40
62. South of Carlisle,	3	20	3	20	3	20	7 $\frac{1}{2}$	50	3	15		
63. Ascot,												
64. Penrith,	2	24	2	24	2 $\frac{1}{2}$	25	4	28	2	16		

Keswick,

Places.	Wheat.		Rye.		Barley.		Oats.		Pease.		Beans.	
	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.	Seed.	Crop.
65. Keswick,	2½	37			6	40	7	50				
66. Skopp,	2	20					7½	35				
67. Holme, near Burton,	2	13	2	10	3	20	4	24	1½	7	2	23
68. Kabers,	3½	26	3	32	3	30	6	40	3	30	4	36
69. Garstang,	3	35			3	30	7	45			4½	30
70. Ormskirk,	1½	27			2½	20	4	20			2½	30
71. Altringham,	2	30			4	33	4½	45			3	40
72. Knot-ford,					3	40	5	45				
73. Litchfield to Birming- ham, Shenston	2	25	2	30	3½	40	4	45	4	30		
74. Near Bir- mingham, Aston,	2½	24			3½	25	5	32	3	20		
75. Hagley,	2	28	2½	20	3½	35	4	36	3½	30		
76. Bensington,	2	28			2½	32	2½	52			2	40
77. North Mims	2½	20			4	24	4	32	3	24		

Averages Seed. Wheat 2 bushels, 1 peck.

Rye 2 ditto, 1 ditto.

Barley 3 ditto, 1 ditto.

Oats 4 ditto, 2 ditto.

Pease 3 ditto,

Beans 3 ditto, 3 ditto.

These

These are the general average quantities of seed used in this extensive track of country: I am somewhat surprized at their not being higher: The idea I had formed was superior to these quantities. I shall in the next place draw the products into averages according to the quantities of seed: There will be much utility in discovering those quantities that are most beneficial; and I should remark, that the result, though not absolutely decisive, will be of no trifling authority: Tillage, soil, and rent are, doubtless, of great consequence, and cause variations that overpower all other circumstances; but this general view includes *all* circumstances, and promiscuously; every quantity of seed is equal in that respect, for none are rejected; the chances of soil, tillage, and manuring run through the whole.

The quantity of seed is one of the most important as well as dubious points in husbandry; the crop must depend on it so much, that it is impossible but the averages of quantity must be attended with a corresponding effect in those of crop. I shall begin with Wheat, but shall omit the names of the places, as it would take up so much room, and the reader may see them by throwing his eye upon the table.

From

From the smallest quantity to two bushels inclusive.

	Seed	Crop		Seed	Crop
Numb. 4.	2	15	Numb. 41.	2	20
5.	2	20	44.	2	21
6.	2	24	45.	2	32
7.	2	25	48.	2	15
8.	2	15	51.	2	25
9.	2	22	52.	2	33
10.	2	15	53.	2	16
11.	2	24	55.	2	20
14.	2	27	57.	2	10
20.	2	22	59.	2	18
23.	2	17	64.	2	24
24.	2	21	66.	2	20
26.	2	32	67.	2	13
27.	2	24	70.	1½	27
32.	2	24	71.	2	30
34.	2	20	73.	2	25
38.	2	25	75.	2	28
39.	2	20	76.	2	28
40.	1	20			

Average product 22 bushels.

Two bushels and half of seed.

Numb. 1. — 25	Numb. 37. — 16
2. — 23	42. — 25
3. — 15	43. — 16
12. — 20	46. — 20
19. — 20	47. — 20
22. — 30	49. — 22
29. — 32	54. — 14
30. — 18	65. — 37
31. — 27	74. — 24
35. — 28	77. — 20

Average product of these, 23 bushels 2 pecks.

Three bushels of seed.

		<i>Crop</i>	
Numb.	17. — 16	Numb.	56. — 21
	18. — 20		58. — 24
	21. — 19		60. — 24
	25. — 24		61. — 30
	28. — 24		62. — 20
	36. — 24		69. — 35

Average product of these, 23 bushels 1 peck.

As there are only two numbers where the seed exceeds three, one twenty and the other twenty - six, averages cannot be drawn; but it is observable, that one of these places exceeds by three bushels the average product from three of seed.

Product from 3	—	23	1
from 2 $\frac{1}{2}$	—	22	2
from 2	—	22	0

The difference between these numbers is not great, but it is enough to give us reason for thinking, that the writers who talk largely of the vast loss of over-feeding, rather exaggerate the matter. They assert, that the farmers lose infinitely by over-sowing: It is true, the ballance between two, and two and a half, is perfectly equal, but yet there is no *loss* by sowing two and a half, which ought to be considerable according to such authors, and the ballance between two and a half and three, is one peck in favour of the latter, which is to-
tally

tally contrary to their ideas. Now I am far from offering this average as a proof that decides at once, I mean it as nothing more than on presumption; which requires experiment to decide, instead of wholesale assertions, which prove nothing.

R Y E.

From one to two bushels inclusive.

Crop		Crop	
Numb.	17. — 16	Numb.	49. — 45
	22. — 25		53. — 30
	23. — 20		54. — 20
	35. — 28		55. — 20
	37. — 28		58. — 30
	39. — 28		59. — 20
	41. — 25		64. — 24
	43. — 40		67. — 13
	44. — 27		73. — 30

Average product of these, 26 bushels.

Two and an half.

Numb.	25. — 24	Numb.	51. — 40
	31. — 24		61. — 35
	42. — 40		75. — 20
	46. — 20		

Average product of these, 29 bushels.

Three bushels.

Numb.	27. — 24	Numb.	62. — 20
	36. — 20		68. — 32

Average product of these, 24 bushels.

One

One place three and a half produces eighteen. It would be astonishing, I think, if so much any where yielded a great crop.

Average of $2\frac{1}{2}$ bushels, — 29

———— 2 — — 26

———— 3 — — 24

I should not, from the smallness of the seed, have thought that two bushels had been less advantageous than two and a half. Indeed, it includes some less quantities, which I apprehend must occasion some part of the inferiority; however, the difference between these is so considerable, that there certainly is much reason to suppose two bushels and a half better than two. Three are evidently too much.

B A R L E Y. —

From one to two bushels inclusive.

Numb.	Crop	Numb.	Crop
5. —	24	41. —	32
34. —	32	50. —	40
35. —	40	52. —	45
38. —	40	54. —	20
40. —	32	55. —	40

Average product, 4 quarters, 2 bushels, 2 pecks.

From two bushels and an half.

Numb.	Crop	Numb.	Crop
37. —	24	51. —	35
44. —	32	53. —	30
47. —	28	64. —	25
48. —	20	70. —	20
49. —	32	76. —	32

Average product, 3 quarters, 3 bushels, 3 pecks.

From

From three bushels.

Numb.	Crop	Numb.	Crop
4.	23	43.	25
16.	36	46.	20
17.	28	57.	24
22.	35	59.	24
23.	15	61.	32
25.	24	62.	20
26.	40	67.	20
31.	40	68.	30
32.	28	69.	30
33.	9	72.	40
42.	45		

Average product, 3 quarters, 4 bushels.

From three bushels and an half.

Numb. 19.	32	Numb. 73.	40
24.	38	74.	25
58.	28	75.	35

Average product, 4 quarters, 1 bushel.

From four bushels.

Numb. 1.	32	Numb. 18.	32
2.	36	20.	28
3.	24	21.	32
6.	24	27.	32
8.	28	28.	36
9.	24	29.	40
10.	24	30.	32
11.	32	36.	28
12.	32	56.	40
14.	27	71.	33
15.	32	77.	24

Average product, 3 quarters, 6 bushels, 2 pecks.

From

From four bushels and an half and upwards.

	<i>Crop</i>		<i>Crop</i>
Numb. 7. — 40		60. — 36	
13. — 16			

Average product, 3 quarters, 6 bushels, 1 peck.

Product from two bushels;	4	2	2
—— from three bushels			
and a half, -	4	1	0
—— from four, - -	3	6	2
—— from four and a half, 3	6	1	
—— from three, - -	3	4	0
—— from two and a half, 3	3	3	3

This scale of products is so contrary to all rules and ideas, that it is difficult to know what to think of it. The smallest quantity of seed produces the most; in consistence with which, the other quantities ought to be marked in inferiority in proportion to the largeness; whereas, the next to two bushels, viz. two and a half, is in product the lowest of all the rest; four bushels exceed it, whereas that quantity, in proportion to the first article in the scale, should have produced much less. There is a regular progressive rise from two and a half to three, and from three to four, and from four to four and a half a fall; but two, and three and a half, break the chain. It is idle to reason upon matters of this sort, which are not accountable

for from facts : Thus far, however, I should add; two bushels, in the preceding minutes, appear to be the quantity used by several very skilful cultivators, particularly Mr. *Scroop* and Lord *Darlington*, whose fields certainly are in great heart, besides being the common practice in several rich soils. Now on such a small quantity it is probably much superior to a very large one, from the branching of plants on such; and this circumstance, I think, from looking over the table, is more peculiar to that quantity than the rest. The largest, *viz.* four and a half, &c. is particularly unfavourable in including the practice between *Stamford* and *Grimsthorpe*, where husbandry is, I think, at a lower ebb than in any place throughout the whole tour. This division in the scale contains only two other numbers, the average of which, rejecting that peculiar one, would be higher than the average of four bushels. But when the result of such calculations turns out in this manner, we must attribute seeming contradiction to circumstances unknown.

O A T S.

From three bushels and under.

Numb.		Crop	Numb.		Crop
4.	—	28	44.	—	30
13.	—	16	76.	—	52
35.	—	40			

Average product of these, 4 quarters, 1 bushel.

From

From three to four bushels.

Crop.		Crop.	
Numb.	1. — 32	Numb.	31. — 36
	2. — 36		32. — 16
	3. — 12		33. — 12
	5. — 32		34. — 24
	6. — 24		37. — 30
	8. — 18		38. — 40
	9. — 24		39. — 40
	10. — 16		41. — 40
	12. — 40		45. — 56
	15. — 32		47. — 30
	17. — 24		48. — 24
	18. — 32		49. — 35
	20. — 40		50. — 50
	22. — 55		51. — 40
	23. — 32		64. — 28
	24. — 36		67. — 24
	26. — 40		70. — 20
	27. — 40		73. — 45
	28. — 48		75. — 36
	29. — 32		77. — 32

Average product, 4 quarters.

From four bushels and an half.

Numb.	21. — 40	Numb.	52. — 45
	36. — 32		53. — 30
	40. — 45		71. — 45
	46. — 24		

Average product, 4 quarters, 5 bushels, 1 peck.

From five bushels.

	Crop.		Crop.
Numb.	7. — 36	Numb.	42. — 45
	16. — 40		43. — 33
	19. — 32		54. — 30
	25. — 32		72. — 45
	30. — 40		74. — 32
Average product, 4 quarters, 4 bushels, 2 pecks.			

From six bushels.

Numb.	55. — 40	Numb.	59. — 50
	56. — 48		61. — 90
	57. — 30		68. — 40
	58. — 40		
Average product, 6 quarters, 1 peck.			

From seven bushels.

Numb.	60. — 50	Numb.	65. — 50
	62. — 50		69. — 45
Average product, 6 quarters, 3 pecks.			

Only one number of seven and a half, it is not, therefore, taken into the account.

	Q.	B.	P.
Product from seven bushels,	6	0	3
fix ditto, -	6	0	1
four and a half			
ditto, -	4	5	1
five ditto, -	4	4	2
three ditto, -	4	1	0
four ditto, -	4	0	0

Another

Another way, and perhaps a juster one, as more comprehensive, of striking the medium, will be as follows :

Product from six and seven			
bushels,	6	0	2
four and a half			
and five ditto,	4	4	3
three and four			
ditto, -	4	0	2

From this scale there are some circumstances clearly demonstrated, and a few that remain doubtful; of the latter are the distinctions between six and seven, four and a half and five, and three and four; the balance between these quantities is extremely small; indeed so much, that when seed is deducted, it will be very difficult to say which appears the best. In the last table also the difference between the quantities, from the smallest to five bushels, is so slight (seed deducted) that they all remain nearly upon a par. But, on the other hand, the superiority of six and seven bushels is so great, that there is the greatest reason to think the other quantities are not equal to these in advantage; at least, if it is not so, it must be attributed to causes that have nothing to do with the present enquiry.

Six or seven bushels are so large a quantity, according to most peoples ideas, and so absolutely contrary to all the prescrip-

tions and opinions of the writers of husbandry, that many, upon the very mention, would directly conclude the crops trifling, and not to be compared with others raised from less seed: But all this is very contrary to the fact; whatever reasoning may be used to answer these averages, still the result, in whatever manner gained, will give to the larger quantity of seed the larger produce, and that in a considerable degree; so that the modern ideas of small quantities of seed are not universally to be adopted. Experiments should be tried on all sorts of soils, and in every situation, on small pieces of land (that the similarity of soil may be certain) to decide this important point; but until we see something decisive, we must be content with such authorities as are to be gained from common practice.

P E A S E.

From two bushels and under.

Crop	Crop
Numb. 23. — 10	Numb. 54. — 14
36. — 16	59. — 10
41. — 16	64. — 16
43. — 17	67. — 7
47. — 30	

Average product, 1 quarter, 7 bushels.

From

From two bushels and an half.

	<i>Crop</i>		<i>Crop</i>
Numb. 2.	— 17	Numb. 37.	— 16
9.	— 20	46.	— 24
30.	— 20	51.	— 30
35.	— 15		

Average product, 2 quarters, 4 bushels, 1 peck.

From three bushels.

Numb. 4.	— 32	Numb. 42.	— 16
12.	— 20	44.	— 20
16.	— 24	48.	— 12
17.	— 14	55.	— 20
19.	— 20	62.	— 15
20.	— 15	68.	— 30
21.	— 14	74.	— 20
32.	— 24	77.	— 24

Average product, 2 quarters, 4 bushels.

From three bushels and an half.

Numb. 13.	— 16	Numb. 31.	— 24
15.	— 24	58.	— 20
24.	— 16	75.	— 30
29.	— 32		

Average product, 2 quarters, 7 bushels.

From four bushels.

Numb. 1.	— 20	Numb. 22.	— 17
3.	— 17	45.	— 32
5.	— 24	49.	— 32
6.	— 20	56.	— 25
7.	— 20	57.	— 15
10.	— 12	73.	— 30

Average product, 2 quarters, 6 bushels.

From four and an half to five bushels.

Crop	Crop
Numb. 38. — 30	Numb. 61. — 15
Average product, 2 quarters, 6 bushels, 2 pecks.	

Product from three and a half,	2	7	0
from four and a half			
and five, - -	2	6	2
from four, - -	2	6	0
from two and a half, 2	4	1	
from three, - -	2	4	0
from two, - -	1	7	0

Another average may be formed out of these, in the following manner :

Product from three and a half			
to five, - -	2	6	2
from two to three, -	2	2	1

In the first of these tables there are many disproportions; very little gradation is to be found in the product from a less quantity to a greater of seed, or from a greater to a less. Three exceeds two, but two and a half exceeds three; four is superior to three, and four and a half and five to four; but then three and a half beats all: These are seeming contradictions; but then other points of comparison are equally clear; for instance, three and a half is much superior to two and to three; even four and a half and five much exceed two; from whence we may conclude, that three and

and a half is the most beneficial quantity. The second table proves equally clear, that the larger quantity of seed is, upon the whole, most advantageous.

At this I am not surprized; for if pease are not hoed (which is the case through nine tenths of the kingdom) the crop requires to be sown so thick as to enable it soon to smother the weeds, which it can only do by joining, and the tendrils entangling with each other; this thickness kills the weeds; whereas if the seed is spread very thin, the weeds have time to gain much vigour before the pease begin the attack; and as to richness of soil, and the superior strength of a vegetable that stands single over that of others which are crouded; this reasoning is as applicable to the weeds as to the crop; the fertility of soil will carry on the one as well as the other.

B E A N S.

From two and two bushels and an half.

	<i>Crop</i>		<i>Crop</i>
Numb. 2.	— 20	Numb. 67.	— 23
4.	— 25	70.	— 30
9.	— 24	76.	— 40
30.	— 32		

Average product, 3 quarters, 3 bushels, 2 pecks.

From

From three and three bushels and an half.

	Crop		Crop
Numb. 19.	— 30	Numb. 28.	— 23
20.	— 18	29.	— 40
23.	— 24	50.	— 31
24.	— 30	54.	— 28
26.	— 32	57.	— 18
27.	— 20	71.	— 40

Average product, 3 quarters, 3 bushels, 3 pecks.

From four and four bushels and an half.

Numb. 10.	— 15	Numb. 35.	— 24
11.	— 24	36.	— 16
14.	— 20	41.	— 20
15.	— 24	44.	— 30
16.	— 20	45.	— 30
18.	— 18	46.	— 24
21.	— 26	49.	— 22
22.	— 17	68.	— 36
31.	— 18	69.	— 30
32.	— 28		

Average product, 2 quarters, 7 bushels, 1 peck.

From five, five and an half, and six bushels.

Numb. 7.	— 20	Numb. 55.	— 45
25.	— 22	56.	— 60
37.	— 24	61.	— 40
42.	— 25		

Average product, 4 quarters, 1 bushel, 2 pecks.

Product

Product from five to six,	-	4	1	2
from three and three				
and a half,	-	3	3	3
from two and two				
and a half,	-	3	3	2

This is a regular progression; but yet, seed considered, it is pretty equal from two to three and a half; but five to six is much superior, which appears to me very extraordinary; for the same reason for sowing thick does not hold with beans as with pease: I should have apprehended, that the addition of two bushels after three would have rather damaged than increased the crop.

Upon the whole, the following are the quantities of each article that appear in these averages to be the most beneficial.

Of wheat,	-	-	-	3	bushels.
Of rye,	-	-	-	2 $\frac{1}{2}$	ditto.
Of barley,	-	-	-	2	ditto.
Of oats,	-	-	-	6	ditto.
Of pease,	-	-	-	3 $\frac{1}{2}$	ditto.
Of beans,	-	-	-	5 $\frac{1}{2}$	ditto.

There is nothing in this table which surprizes me so much as two bushels of barley being the superior quantity; but the observations I made on it, perhaps, may somewhat explain it. Beans are also higher than I should have conceived; the rest,

rest, I apprehend, are consistent with most of the private experience of good common farmers in other parts of the kingdom, as well as those through which this tour was made.

LET-

L E T T E R XXXII.

THROUGHOUT the minutes of this journey you certainly remarked the constant attention I gave to the courses of crops, a part of rural management which is certainly of uncommon importance, since all advantages of rent, soil, manure, &c. are of little avail, if the farmer does not crop his land with judgment. But in making this review, there are some difficulties which I am not clear in my ideas of removing: Something more is requisite than a mere detail of courses; they must be thrown into different divisions, according to their natures, and inserted distinctly with the crops, that we may discover how far the latter are dependent on the former. But these courses vary *ad infinitum*, so that it would be impossible to assign a division to each, for which reason they must be simplified, by reducing them into classes according to their merit. The only proper distinction that, at present, occurs to me, is the number of crops to a fallow: But then the ameliorating ones, or fallow crops, must be esteemed as fallows;

in

in which there is some difficulty; for beans and turneps are certainly fallow crops, when properly cultivated by hoeing; but they are the very contrary when managed improperly; for this reason a distinction must be made between those crops when hoed and unhoed; in the first case I shall arrange them as fallows; and in the second as exhausting crops. Pease must always be ranked as a fallow, because they are every where used as such, in the best cultivated countries, if the crop be good, whether hoed or not; and if it is bad, they cannot well be succeeded as a fallow in the worst. Hoed turneps, hoed beans, pease, potatoes, cabbages, and clover, I shall call fallows.

The best of husbandry, which is a crop and a fallow, I shall rank first: This either a summer fallow, or a fallow crop intervening between the grain, and other crops not fallow ones, so that no two of the latter come together.

In the next class, two crops to a fallow.

In the next, three, and so on.

A crop

A crop and a fallow.

Places.	Soil.	Rent.			Wheat.	Rye.	Barley.	Oats.	Peas.	Beans.	Aver.
		l.	s.	d.							
Hatfield to Welwyn,	Gravel	0	12	0	25		32	32	20		27
Around Stevenage,	Clay	0	9	0	23		36	36	17	20	26
Stevenage to Luton, about Offley,	Chalk	0	5	0	15		24	20	17		19
Dunstable to Wooburn, Houghton,	Various	0	14	0	15		23	28	32	25	24
Wooburn to Newport- Pagnel, Broughton	Ditto	1	0	0	25		40	36	20	20	28
St. Neot's to Kim- bolton, Hale- Weston,	Gravel- ly loam				15		24	16	12	15	16
Casterton near Stamford,	Clay	0	12	6	20		32	40	20		28
Colster- worth to Grantbam,	Gravel	0	10	0	28		28	32	32	24	28
Newark to Tuxford, West Dray- ton,	Sandy gravel	0	15	0			36	40	24	20	30

Sheffield

Places.	Soil.	Rent.			Wheat.	Rye.	Barley.	Oats.	Pease.	Beans.	Aver.
		l.	s.	d.							
<i>Sheffield to Barnsley, at Ecclesfield,</i>		0	17	0	20		32	32	20	30	26
<i>Marquis of Rocking- ham's Ken- tish Farm,</i>	Rich loam				32		40	32	32	40	35
<i>Barnbo- rough, Mr Farrer,</i>	Rich loam	1	10	0	24		48				36
<i>Kirklea- tham, Mr. Turner,</i>	Clay	0	8	4	20		32	45			32
<i>Kiplin, Mr. Crowe,</i>	Clay	0	12	6	32			56	32	30	37
<i>Lord Dar- lington,</i>	Gravel	0	16	0	33		45	45			41
<i>Hetton, near Belford,</i>	Loam	0	6	6	10		24	30	15	18	19
<i>Fenton, near Wooller,</i>	Sandy loam	0	11	3	24	30	28	40	20		28
<i>Pershore,</i>	Clay	0	15	0	25		24		25	25	25
<i>Bendsworth,</i>	Clay	1	2	6		32	48	64	25	40	40
<i>Bensington,</i>	Chalky clay	1	5	6	32		28	52		40	38
<i>Kensington,</i>	Gravel	2	0	0	48		64			48	53
<i>North Mims,</i>	Gravel	0	12	0	20		24	32	24		25

The general medium of these crops, the average of all taken, is 3 quarters, 6 bushels.

Two

Two Crops and a fallow.

Places.	Soil.	Rent.			Wheat.	Rye.	Barley.	Oats.	Peas.	Beans.	Aver.
		l.	s.	d.							
Wooburn to Newport Pagnel, Wanden,	Sand	0	9	9	24		24	24	20		23
Newport to Bedford, Aftwick,					15		28	18			20
Kimboltonto Thrapston,		0	17	0	24		32			24	27
Stamford to Grimsthorp,		0	4	0	20		16	16	16		17
Grantham to Newark, Fossen,	Clay	0	10	0	27		27			20	24
Bawtry to Doncaster,	Sand				16	16	28	24	14		19
York to Barnby- moor,	Clay	0	10	0	30	25	35	55	17	17	30
About Hat- ton,	Gravel	0	12	6	17	20	15	32	10	24	19
Around Risby,	Chalk- stone	0	9	3	21		38	36	16	30	28
Howden,	Clay	0	15	0	24	24	32	40		20	28

Places.	Soil.	Rent.			Wheat.	Rye.	Barley.	Oats.	Pease.	Beans.	Aver.
		l.	s.	d.							
Marquis of <i>Rockingham's</i> <i>Hertfordshire</i> farm	Clay and loam				18		32	40	20	32	28
Around <i>Wentworth</i> ,	Clay loam	0	8	0	27	24	40	36	24	18	28
<i>Driffeld</i> ,	Clay	0	10	0	24		28	16	24	28	24
<i>Brumpton</i> ,	Loam	0	14	0	20		32	24			25
<i>Teddington</i> bridge,	Sandy	0	6	6	28	28	40	40	15	24	29
<i>East Newton</i> ,	Various	0	12	0	24	20	28	32	16	16	22
<i>Nunnington</i> ,	Lime- stone	0	5	10	16	28	24	30	16	24	23
<i>Kirkleatham</i> ,	Clay	0	13	0	25		40	40	32		34
<i>Gilsdale</i> ,	Moory	0	10	6	20	28		40			29
<i>Schorton</i> ,	Gravel	0	10	0	20	25	32	40	16	20	25
<i>Rookby</i> ,	Gravel	0	12	0	16	40	25	33	17		26
Around <i>Swinton</i> ,	Loam	0	16	6	20	20	20	24	24	24	22
<i>Craikbill</i> ,	Gravel	0	13	0	20		28	30	30		27
<i>Slensingford</i> ,	Lime- stone	0	8	0	15		20	24	12		18
Mr. <i>Scroope's</i> husbandry,	Various	0	12	6			40	50		31	40
Around <i>Raby castle</i> ,	Gravel loam	0	16	0	25	40	35	40	30		34

Gosworth,

Places,	Soil.	Rent.			Wheat.	Rye.	Barley.	Oats.	Potatoes.	Beans.	Average.
		l.	s.	d.							
Gosworth, near New- castle,	Loam	1	0	0	16	30	30	30			26
Ascot, south of Carlisle,		0	15	0	20	20	20	50	15		25
Penrith,	Various	0	8	9	24	24	25	28	16		23
Warrington to Liver- pool, Bowles)	Clay	0	17	6	16			25		16	19
Altringham,	Sand & clay	1	0	0	30		33	45		40	37
Holm's-chapel,		1	0	0	20		30	30			27
Rudgeley to Litchfield, Sbenstone,	Light	0	15	0	25	30	40	45	30		34
Aston near Birming- ham,		0	17	6	24		25	32	20		25
Moreton,	Gravel	1	0	0	28		40	40	20	24	30
Henley,	Light	0	17	0	24		24	24			24
Maidenhead,	Clay	1	0	0	28		32	40	28		31

The general medium of these crops, the average of all being taken, is 3 quarters, 2 bushels.

Three crops and a fallow.

Places.	Soil.	Rent.			Wheat.	Rye.	Barley.	Oats.	Peas.	Beans.	Aver.
		l.	s.	d.							
From Don- caster to Rother- ham,	Sandy gravel	0	9	0	20		32	32		18	25
From Shef- field to Barnsley, Woolley,	Clay	0	12	6	22		28	40	15	18	24
Leeds to Tadcaster,	Lime- stone	0	8	6	19		32	40	14	26	26
Stillingfleet,	Clay & sand	0	10	0	24	24	24	32		22	25
Thorne,	Clay	0	10	0	24		36	48		23	32
Richmond to Greta- bridge, Gilling,	Loam	1	1	0	25	40	45	45	16	25	32
About Kip- lin,	Clay & gravel	0	12	6	21	27	32	30	20	30	26
Danby,	Gravel- ly clay	0	12	6	22	45	32	35	32	22	31
Morpeth,	Loamy clay	0	12	0	14	20	20	30	14	28	21
Alnwick,	Light	0	15	0	20	20	40	40	20	45	30
Belford,	Clay	0	15	0	21		40	48	25	60	38
Rothbury,	Various	0	10	6	18	20	24	50	10		24
Cambo,	Clay	0	15	0	24	18	35	50			31

Glenwelt,

Places.	Soil.	Rent.			Wheat.	Rye.	Barley.	Oats.	Peas.	Beans.	Aver.
		l.	s.	d.							
Glenwelt,	Various	0	12	6	30	35	32	90	15	40	40
Kefwick,	{ Hazel	1	5	0	37		40	50			42
	{ mould, &c.										
Shapp,	{ Lime-stone	0	10	6	20			25			22
Burton,	Loam	1	1	0	13	13	20	24	7	23	16
Kabers,	Clay	0	17	0	26	32	30	40	30	36	32
Ormskirk,	{ Sandy loam	0	15	0	27		20	20		30	24
	{ Clay & sand										
Knotsford,		0	16	0			40	45			42
Stone,	Sandy	0	16	0	22		30	40	25	30	29
Hagley,	Various	1	0	0	28	20	35	36	30		29
Broomsgrove,	{ Sand & clay	1	10	0	37		42	50	30	40	39

The medium of the averages, 3 quarters, 5 bushels.

The only place where they run four crops to a fallow is about *Garstang*; soil, clay, &c. Rent, 17s. Wheat, 35s. Barley, 30s. Oats, 45s. Beans, 30s.

2. B. P.

Average product from a crop } 3 6 0
and a fallow, }

Ditto from two crops and a } 3 2 0
fallow, }

Ditto from three crops and a } 3 5 0
fallow, }

The result of this table is not, upon the whole, so striking as I expected: The point of judicious cropping is so very important, that I imagined the effect would appear in this comparison so strong as to over-balance every other consideration: However, the crop and fallow is superior to the others; but two crops and a fallow being inferior to three, is totally beyond all reason's accounting for it; and must be owing to the circumstances of soil, tillage, manuring, &c. that chance to be more favourable to the one than to the other. Upon a supposition that the average rent might be of assistance to explain the result, I have cast them up.

	l.	s.	d.
That of the crop and fallow is,	0	15	6
Of two crops and a fallow, -	0	13	1
Of three ditto, ditto, - -	0	15	0

Now from this sketch one would apprehend, that it was rent alone that occasioned variations in the crops, for the three divisions of product correspond exactly with the rent; but it is impossible that rent should more than balance all other circumstances; we have, on divers opportunities, shewn, that other matters have an equal weight, and in many instances a superior one. The result of this enquiry, upon the whole, leaves great reason to believe,

lieve, that the effect of judicious cropping, though of undoubted importance, is balanced by various favourable circumstances that cannot be taken into the account; which circumstances prevent the division of two crops and a fallow from maintaining the superiority over a worse practice, that a better does over itself. The superiority of the best course, though not great, yet is of some consequence, and as it coincides with the acknowledged ideas of good husbandry, deserves the more attention. And it should be remarked, that bad courses proving successful, is a strong presumption of good husbandry; for the management must be excellent that will counteract the ill effects.

L E T T E R XXXIV.

BEFORE I take my leave of arable land, and its management, you must allow me to review the principal operation of tillage, *viz.* ploughing; that we may be able to form a just idea of the proportion, if any, between the strength and expence, and the quantity of work performed; it may be of utility to know in what degree this branch of the practice of husbandry is founded on just proportions, and how far it is liable to objections: Evils must be known before they can be cured; and the knowledge of the existence of good, prevents the false ideas of throwing each object into a worse light than the reality: These sort of enquiries are not of the less use, because they sometimes bring matters to light that are unexpected, and contrary, perhaps, to just ideas; on whatever side the result turns, the very knowledge of the fact must be useful: For there is as great an impropriety in descanting on practices apparently mischievous, but which in reality are innocent, as in praising every thing that is commonly done, merely because *it is common*. But to return.

Around

Around Stevenage.

Soil. Much clay.

Draught. Four horses and two men.

Work. An acre.

From Stevenage to Luton, at Offley.

Soil. A chalky clay.

Draught. Four horses and two men.

Work. An acre.

From Dunstable to Wooburn, Houghton.

Soil. Chalk and clay.

Draught. Three horses at length,
and a driver.

Work. An acre and a half in light
work.

At Milton.

Soil. Clayey gravel.

Draught. Four or five horses at length,
with a driver.

Work. An acre.

Wooburn to Newport Pagnell, Wanden.

Soil. Sand.

Draught. Four or five horses at
length

Work. An acre.

About Broughton.

Soil. Loam.

Draught. Four or five horses at
length, and a driver.

Work. An acre.

From St. Neots to Kimbolton.

Soil. A gravelly loam.

Draught.

Draught. From three to six horses
at length.

Work. Five roods.

From *Kimbolton to Thrapston.*

Soil. Clay.

Draught. From four to eight horses,

Work. Five roods.

From *Stamford to Grimsthorpe.*

Soil. Gravelly loam.

Draught. From four to six horses at
length.

Work. An acre.

From *Grantham to Newark.*

Soil. Clay.

Draught. Four horses at length.

Work. An acre.

At *West Drayton.*

Soil. Sandy gravel.

Draught. Three or four horses, with
a driver.

Work. An acre.

From *Bawtry to Doncaster, about Can-
tler.*

Soil. Sand.

Draught. Three horses at length.

Work. An acre.

From *Sheffield to Barnsley, at Ecclesfield.*

Soil. Loam.

Draught. Three and four horses at
length.

Work. An acre.

At

At Woolley.

Soil. Clay.

Draught. Three or four horses at length, sometimes two a-breast.

Work. An acre.

Leeds to Tadcaster.

Soil. Clay, &c.

Draught. Two horses double in their light lands, and in the strong four oxen and one horse, or two and two.

Oxen reckoned the best for ploughing.

York to Beverley, at Wilbersfort.

Soil. Clay.

Draught. Two horses double.

Work. An acre.

Throughout this track of country many oxen; the waggons all two oxen and two horses; the former much the best, out-draw and out-plough the horses.

At Stillingfleet.

Soil. Clay and sand.

Draught. Two or three horses a-breast.

Work. An acre.

Price. 3 s. 6 d. first stirring; the rest 2 s. 6 d.

About Howden.

Soil. Clay.

Draught. Two or three horses a-breast.

Work. An acre.

Price. 2 s. 6 d.

About

About *Thorne*.

Soil. Clay.

Draught. Two horses.

Work. An acre.

Price. 4 s.

Marquis of *Rockingham's Kentish* farm.

Soil. Loams.

Draught. Three or four horses, and
a driver.

Work. An acre.

Proportion of draught cattle to arable
land. Six horses to sixty acres.

His Lordship's *Hertfordshire* farm.

Soil. Clay and loam.

Draught. Three or four horses.

Work. An acre.

Proportion. Four to eighty acres.

Around *Wentworth*.

Soil. Clay and loam.

Draught. Strong work four at length,
afterwards two a-breast.

Work. An acre.

Price. 5 s. per acre.

Proportion. Six horses to sixty acres.

Horses reckoned better for tillage
than oxen.

From *Beverley* to *Driffield*, about the
latter.

Soil. Clay.

Draught. Four horses a-breast.

Work. Five roods.

Price.

Price. 2 s. 6 d.

Proportion. Six oxen and eight horses to one hundred and twenty acres.

Around Ganton.

Soil. Thin light wold land.

Draught. Two horses.

Work. Half an acre.

Price. 5 s.

East Newton.

Soil. Various.

Draught. Two, three, or four horses in a plough.

Work. Five roods.

Price. 3 s. 9 d.

Proportion. Eight horses to one hundred acres.

Horses they find quicker than oxen, but the latter most steady and much the most profitable. The proportion of pace is, the horses ploughing their acre in six hours, and the oxen in eight.

At Nunnington.

Soil. Lime-stone land.

Draught. Four horses and two oxen.

Work. An acre.

Price. 4 s. 6 d.

Proportion. Six horses to fifty acres.

Horses reckoned to do the work best, but cheapest done with oxen.

Across

Across Hambledon, Kirby.

Soil. Sand.

Draught. Three horses at length.

Work. An acre.

Price. 5 s.

Mr. Turner's husbandry at Kirkleatham.

Soil. Clay.

Draught. Two oxen and one horse,
and a driver.

Work. An acre.

Depth. Four inches.

Oxen much more profitable than
horses.

Around Kirkleatham.

Soil. Clay.

Draught. Two or three horses; two
double, three at length; a driver to
the first, but none to the last.

Work. An acre.

Price. 5 s.

Proportion. Ten horses to one hun-
dred acres.

At Gilsdale, in Cleveland.

Soil. Various.

Draught. Two or three horses,

Work. An acre.

Price. 5 s.

Proportion. Three horses to twenty
acres.

Cleveland to Richmond; Schorton.

Soil. Gravels.

Draught.

Draught. The first stirring two oxen and four horses, at other times two and two.

Depth. Five inches.

Price. 5 s.

Proportion. Six horses and four oxen to fifty acres.

From *Richmond* to *Greta-Bridge*; *Gilling*.

Soil. Light loams.

Draught. Two oxen and four horses for fallowing, but often stir with three horses.

Work. An acre.

Depth. Five inches.

Price. 5 s.

Proportion. Four oxen and eight horses to one hundred acres.

Oxen they reckon much better and more profitable than horses.

At *Rookby*.

Soil. Gravels.

Draught. Two oxen and two or three horses.

Work. An acre.

Depth. Six inches.

Price. 5 s.

Proportion. Six horses and four oxen to one hundred acres.

At *Kiplin*.

Soil. Clay and gravel.

Draught.

Draught. Four horses in fallowing,
three at other times.

Work. An acre.

Depth. In clay four inches, in gravel six.

Price. 5s.

Proportion. Eight horses to one hundred acres.

About Swinton.

Soil. Loam and gravel.

Draught. Four horses and two oxen;
and four horses.

Work. Scarcely an acre.

Depth. Five inches.

Price. 5s.

Proportion. Three horses and two oxen, or five horses, to fifty acres.

Oxen reckoned much the steadiest draught, and to plough the land best; but horses are most used.

About Craikbill.

Soil. Gravel.

Draught. Four horses.

Work. Three roods in fallowing, afterwards an acre.

Depth. Five inches.

Price. 4s.

Proportion. Six horses to fifty acres.

Around Slanningford.

Soil. Thin light loam on lime-stone.

Draught. Three horses.

Work.

Work. An acre.

Depth. Four inches.

Price. 4 s.

Proportion. Four horses to fifty acres.

Around *Danby*.

Soil. Gravelly, clay, and loams.

Draught. Two horses and two oxen,

Work. An acre.

Price. 4 s. 9 d.

Proportion. Four horses and six oxen
to one hundred acres.

Around *Raby-Castle*.

Soil. Gravel and clay.

Draught. In clay two oxen and two
horses; in gravel three horses.

Work. Three roods.

Depth. Six inches.

Price. 4 s.

Proportion. Eight horses and eight
oxen to one hundred acres of clay;
four of each in gravel.

Oxen they reckon better and more
profitable than horses.

At *Gosworth*, north of *Newcastle*.

Soil. Loam and sand.

Draught. Three horses.

Work. An acre.

Depth. Five inches.

Price. 5 s.

Proportion. Eight horses to one hundred acres.

Around Morpetb.

Soil. A loamy clay.

Draught. Three horses, or two horses and two oxen.

Work. Half an acre in the strongest work, and one and a half in the lighter.

Depth. Four inches and a half.

Price. 5s. 6d. per acre.

Proportion. Six horses to one hundred acres.

At Alnwick.

Soil. Light loam and gravel.

Draught. Two horses.

Work. An acre and a half.

Depth. Four inches.

Price. 3s. per acre.

Proportion. Four horses to one hundred acres.

At Belford.

Soil. Clayey loam.

Draught. Two oxen and two horses; and two horses.

Work. In strongest work half an acre; in the lighter an acre and a half.

At Hettôn, near Belford.

Soi.

Soil. Loams.

Draught. Two horses and two oxen;
and two horses.

Work. In summer an acre, in winter three roods.

Depth. Seven inches and a half in light loams.

Price. 5 s. per acre.

Proportion. Twenty horses and twenty oxen for five hundred acres.

Fenton, near Wooller.

Soil. Sandy loams.

Draught. Two horses and two oxen.

Work. An acre.

Depth. Four to seven inches.

Price. 3 s. 6 d. to 5 s.

Proportion. Twenty horses and sixteen oxen to five hundred acres.

They prefer horses so much, that oxen are going out of use by degrees.

About Rotbury.

Soil. Various.

Draught. Two horses and two oxen;
sometimes only two horses.

Work. From half to three quarters
of an acre a day.

Depth. Five inches.

Price. 3 s. 6 d. per acre.

Proportion. Four horses and four oxen
to one hundred acres.

T 2

About

About *Cambo*.

Soil. Clay and moory.

Draught. Three horses, and two horses and two oxen.

Work. Three roods.

Depth. Five inches.

Price. 3 s.

About *Glenwelt*.

Soil. Sand, gravel, and clay.

Draught. Two horses and two oxen.

Work. An acre.

Depth. Four inches.

Price. 6 s. per acre.

Proportion. Four horses and four oxen to one hundred acres.

They reckon oxen much the best on stony and unlevel ground; but on other land horses.

About *Ascot*, south of *Carlisle*.

Soil. Loam, gravel, and clay.

Draught. Two horses.

Work. An acre.

Depth. Six inches.

Price. 5 s. per acre.

Proportion. Six horses to one hundred acres.

About *Penrith*.

Soil. Clay, sand, gravel, loam.

Draught. Two or four horses.

Work.

Work. An acre and a half.

Depth. Four inches.

Price. 5 s. to 5 s. 6 d. *per* acre.

Proportion. Six horses to one hundred acres.

About *Keswick*.

Soil. Light loam, sand, and gravel.

Draught. Two or four horses.

Work. An acre.

Price. 5 s. to 6 s. *per* acre.

Proportion. Twelve horses to one hundred acres.

About *Shapp*.

Soil. Light loam on lime-stone.

Draught. Two or three horses.

Work. An acre.

Depth. Five inches.

Price. 5 s. to 6 s. *per* acre.

At *Holme*, near *Burton*.

Soil. Light loam on a lime-stone.

Draught. Three or four horses.

Work. Three roods.

Depth. Five or six inches.

Price. 8 s. *per* acre.

Proportion. Four horses to fifty acres.

At *Kabers*.

Soil. Clay.

Draught. Six horses.

Work. An acre.

Depth. Four or five inches.

Proportion. Six horses to fifty acres.

Around Garflang.

Soil. Clay and light loam.

Draught. Four horses.

Work. An acre.

Depth. Six inches.

Price. 8s. per acre.

Proportion. Twelve or thirteen horses
to one hundred acres.

Around Ormskirk.

Soil. A sandy loam.

Draught. Two or three horses.

Depth. Six inches.

Price. 4s. to 5s. per acre.

Proportion. Six horses to one hun-
dred acres.

About Altringham.

Soil. Loam and sand.

Draught. Three or four horses.

Work. An acre.

Depth. Five inches.

Price. 5s. 3d. per acre.

Proportion. Six horses to one hun-
dred acres.

About Stone.

Soil. Sand and loams.

Draught. Three or four horses.

Work. An acre and a quarter, or
half.

Depth. Four inches.

Price. 5s. per acre.

Pro-

Proportion. Eight horses to one hundred acres.

About *Shenstone*.

Soil. Light, sandy, and gravelly.

Draught. Three or four horses.

Work. An acre.

Depth. Two to four inches.

Price. 5 s. per acre.

Proportion. Six horses to one hundred acres.

At *Aston*, near *Birmingham*.

Soil. Sand.

Draught. Two or three horses.

Work. An acre.

Depth. From three to six inches.

Proportion. Six horses to one hundred acres.

About *Hagley*.

Soil. Light loams, sand, and clay.

Draught. Three horses at length in common ploughs; four in double ploughs.

Work. An acre with the first; with the second two.

Depth. From three to five inches.

Price. 6 s. per acre.

Proportion. Seven horses to one hundred acres.

About *Broomsgrave*.

Soil. Sand and clay.

T 4

Draught.

Draught. Four horses in both common and double ploughs.

Work. An acre with the first; double with the others.

Depth. From four to six inches.

Price. 4 s. to 5 s. per acre.

Proportion. Eight horses to one hundred acres.

Bendsworth, near Evesham.

Soil. Clay.

Draught. Five or six horses at length.

Work. An acre.

Depth. Two and a half or three inches.

Price. 6 s. per acre.

Proportion. Twelve horses to one hundred acres.

Evesham to Oxford, at Moreton.

Soil. Gravel.

Draught. Four horses at length.

Work. An acre.

Depth. Four or five inches.

Price, 7 s. 6 d. per acre.

Proportion. Eight or nine to one hundred acres.

From Oxford to Henley, about Bensington.

Soil. Gravel, sand, and clay.

Draught.

Draught. In strong land five horses;
in light three.

Work. In strong land three quarters
of an acre a day; in light, one and
a half.

Depth. Three inches deep in strong
land; in light four.

Price. 6 s. per acre.

Proportion. Five horses to one hun-
dred acres.

About *Henley*.

Soil. Gravel, chalk, clay, &c.

Draught. Four horses.

Work. An acre.

Price. 5 s. to 7 s. 6 d. per acre.

Proportion. Six horses to fifty acres.

About *Harmondsworth*.

Soil. Gravel and loam.

Draught. Four horses.

Work. An acre and a half.

Depth. Four inches.

Price. 5 s. 6 d. per acre.

***North Mims*.**

Soil. Pebbly gravel.

Draught. Four horses.

Work. An acre.

Depth. Three to four inches.

Price. 5 s. per acre.

Pro-

Proportion. Eight horses to one hundred acres.

Having thus brought these various articles of intelligence into one point of view, I shall, in the next place, endeavour to throw them into particular lights, respecting the most material of their variations. I shall shew the state of tillage on three soils, *sand, loam, clay*, which include all others; and is as much as to say, light, middling, heavy. By presenting a view of each particular on these soils, first, we shall discover whether the strength of the soil is the rule that guides the conduct of tillage: Whensoever four or five, five or six, &c. &c. are used, I shall always divide them, though I be forced to make a supposition of half a horse; the general average will not carry the face of such a seeming absurdity, though particular instances may. Horses and oxen I must suppose the same, and where the soil is various, the medium, viz. loam, must be taken.

SAND.

S A N D.

Places,	Draught.	Work.	Depth, inches.	Price. s. d.	Proportion per 100 acres.	Comparison between horses and oxen.
Wanden,	4½	I				
Drayton,	3½	I				
Cantler,	3	I				
Ganton,	2	½		5		
Kirby,	3	I		5		
Gilling,	6	I	5	5	I 2	Oxen best
Slensingford,	3	I	4	4	8	
Gosworth,	3	I	5	5	8	
Fenton,	4	I	5½	4 3	7	Horses best
Glenwelt,	4	I	4	6	8	Oxen best
Keswick,	3	I		5 6	I 2	
Shapp,	2½	I	5	5 6		
Holme,	3½	¾	5½	8	8	
Ormskirk,	2½		6	4 6	6	
Altringham,	3½	I	5	5 3	6	
Stone,	3½	I ¼	4	5	8	
Shenstone,	3½	I	3	5	6	
Aston,	2½	I	4½		6	
Hagley,	3	I	4	6	7	
Averages,	3	I	4	5	8	LOAM.

L O A M.

Places.	Draught.	Work.	Depth, inches.	Price. s. d.	Proportion per 100 acres.	Comparison between horses and oxen.
Offley,	4	I				
Houghton,	3	I $\frac{1}{2}$				
St. Neot's to Kim- bolton,	4 $\frac{1}{2}$	I $\frac{1}{4}$				
Stamford, to Grims- thorp,	5	I				
Ecclesfield,	3 $\frac{1}{2}$	I				
Stillington,	2 $\frac{1}{2}$	I		3		
Marquis of Rocking- ham's Ken- tish Farm,	3 $\frac{1}{2}$	I			10	
Ditto, Herts,	3 $\frac{1}{2}$	I			5	
Wentworth,	3	I		5	10	Horses best
Newton,	3	I $\frac{1}{2}$		3 9	8	Oxen best
Nunnington,	6	I		4 6	12	Horses best
Gilsdale,	2 $\frac{1}{2}$	I		5	15	
Schorton,	5		5	5	20	
Rookby,	2 $\frac{1}{2}$	I	6	5	10	
Kiplin,	3 $\frac{1}{2}$	I	5	5	8	
Swinton,	5	$\frac{1}{4}$	5	5	10	Oxen best
						Craikbill,

Places.	Draught.	Work.	Depth, inches.	Price. s. d.	Proportion per 100 acres.	Comparison between horses and oxen.
<i>Craikbill,</i>	4	1	5	4	12	
<i>Danby,</i>	4	1		4 9	10	
<i>Raby,</i>	3½	¾	6	4	12	Oxen best
<i>Morpeth,</i>	3½	1	4½	5 6	6	
<i>Alnwick,</i>	2	1½	4	3	4	
<i>Hetton,</i>	3	1	7½	5	8	
<i>Rothbury,</i>	3	¾	5	3 6	8	
<i>Cambo,</i>	3½	¾	5	3		
<i>Ascot,</i>	2	1	6	5	6	
<i>Penrith,</i>	3	1½	4	5 3	6	
<i>Garflang,</i>	4	1	6	8	12½	
<i>Brooms Grove,</i>	4	1	5	4 6	8	
<i>Moreton,</i>	4	1	4½	7 6	8½	
<i>Bensington,</i>	4	1	3½	6	5	
<i>Henley,</i>	4	1		6 3	12	
<i>Harmsworth,</i>	4	1½	4	5 6		
<i>Mims,</i>	4	1	3½	5	8	
Averages,	3½	1	4½	5	9	

CLAY.

Places.	Draughts.	Work.	Depth, inches.	Price, s. d.	Proportion per 100 acres.	Comparison between horses and oxen.
Stevenage,	4	1	4	1	4	Darby,
Milton,	4 $\frac{1}{2}$	1	4	1	3	Kaby,
Kimbolton	6	1 $\frac{1}{4}$	4	1	3	Morpeth,
to Thrapston,	4	1	3	1	3	Alnwick,
Grantbam	4	1	2	1	3	Hilton,
to Newark,	8	1	3	3	3	Robbany,
Woolley,	3	1	3	3	3	Oxen belt
Leeds to	3 $\frac{1}{2}$	1	3	3	3	Oxen belt
Tadcaster,	2	1	3	2	6	Howden,
Wilbersfort,	2 $\frac{1}{2}$	1	3	4	4	Thorne,
Howden,	2	1	3	2	6	Driffield,
Thorne,	4	1 $\frac{1}{4}$	4	1	4	Mr. Turner,
Driffield,	3	1	4	5	10	Kirkleatham,
Mr. Turner,	2 $\frac{1}{2}$	1	3	6	12	Belford,
Kirkleatham,	3	1	4	12	12	Kabers,
Belford,	6	1	2 $\frac{1}{4}$	6	12	Bendsworth,
Kabers,	5 $\frac{1}{2}$	1	3 $\frac{1}{2}$	4	11	Averages,
Bendsworth,	3 $\frac{1}{2}$	1	3 $\frac{1}{2}$	4	11	
Averages,	3 $\frac{1}{2}$	1	3 $\frac{1}{2}$	4	11	

Recapitulation.

Sand,	3	1	4	5	8
Loam,	3 $\frac{1}{2}$	1	4 $\frac{3}{4}$	5	9
Clay,	3 $\frac{1}{2}$	1	3 $\frac{1}{2}$	4	11
Gen. Average	3 $\frac{1}{2}$	1	4	4	8

This view of the state of tillage throughout the counties I travelled, throws the whole matter into a very clear light: the result is certainly surprizing. I never had any conception that a just proportion would be found between the nature of the soil, and the strength employed to till it; but that all common sense would be put so totally to the blush, as in this table, was what I had little notion of. The equality of the draughts, on such different soils, is strange: the clay land takes no greater force than the loam; and the sand, within a seventh part as much as either of them. This shews clearly, that custom alone has been the guide of the farmers in the number of draught cattle they use; a piece of absurdity, which must be attended with wretched effects on their profit; and fatal ones to the good of the kingdom at large.

Had the average draught of all soils been no greater than requisite, the evil would not have been so great; but three and a half is more cattle than necessary for any soil in *England*, provided the husbandry is good. If fallows are broke up at the season they universally ought, two horses, or two stout oxen, are sufficient for the strongest of all soils, alone excepting such as are on very steep hills; and even in that case the

the course of ploughing ought ever to be across the slope, which reduces the labour nearly to that of a level. Thus the grand average is near double the requisite strength. That of clay is the same as the general average; what, therefore, must be the excess of sand?

No farmer can urge the effect of long experience in answer to this remark; his instancing the custom of his neighbours, and the prescription of ages, is of no avail; since nothing can be clearer than *that* custom and *that* experience are the effect of chance; not the result of reason, of knowledge, or experiment. No demonstration in mathematics can be clearer than the plain assertion, that clay requires a greater strength to work it than sand; which strength may as well lie in the quantity performed in a day, as in the number of cattle. This maxim every farmer will agree to; but they have no notion of the result of a general average.

But in this table we find a yet greater equality in the quantity ploughed, than in the number of cattle; nothing, therefore, is more certain, than the whole economy of tillage being quite a matter of chance. One cannot view a light sandy country ploughing with more than as many cattle as would till the strongest clays, without
 their

their performing more in quantity; one cannot think of such a course of business without indignation: thousands of families are deprived of half their subsistence; and the kingdom feeds millions of horses instead of industrious subjects. It is an object of infinite importance, and calls for attention, from those who have it in their power to remedy so great an evil. The legislature certainly *might* interfere in some way which seemed most consistent with the delicacy of so free a people: but if nothing of that sort should be thought adviseable; or rather, if, among numerous other matters, of equal import, overlooked or despised, to save time for ——— I cannot but recommend it to all landlords to endeavour to remedy, on their own estates, such mischievous customs; there can be no doubt of its being in their power; all that is wanting is resolution: the moment a business is firmly resolved by a man who has money in his pocket, it is half executed: Prizes, rewards, bounties, &c. must be given, not only to farmers but to ploughmen; both farmers and servants should be procured that have been used to good customs, at any expence. It is well worth a landlord's thought; for he cannot introduce a

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cheap, and at the same time good method of culture, into a country, so as to make it common, without virtually raising his rents; besides the satisfaction which, I am confident, numbers must feel at being serviceable to their country.

It is an object, likewise, worthy the attention of the Society for the encouragement of arts, manufactures, and commerce, who might easily devise an honorary premium for such gentlemen as executed such a plan with spirit, over an estate (heretofore cultivated in the old *customary* way) of a certain extent.

Every column of this table is pregnant with contradictions. In that of *depth*, they stir in loam three quarters of an inch deeper than in sand, and in clay within half an inch. This certainly indicates, that custom prescribes also a certain depth in each neighbourhood, which is followed implicitly upon all soils, without any variation; and this custom, as evidently, is the child of chance, not reason.

The column of *price* is also very curious; upon clay a shilling *per* acre cheaper than upon sand or loam, which are equal. This is a fresh proof that the whole is guided by chance-founded customs, and in nothing by the nature of the soil.

That

That of *number of cattle* to an hundred acres is somewhat more reasonable. There is a small variation according to the nature of the land ; but not near so great as there evidently ought to be. This division is another proof how much the agriculture of this kingdom wants reforming in respect of the number of horses. The average of all soils is above nine, a number enormously great ; and corresponds with the extravagant draughts so general in the ploughs.

In several of the richest and best cultivated parts of *Essex*, particularly between *Braintree* and *Hockerill*, by *Samford* and *Thaxted*, the farmers do not keep above four or five horses *per* hundred acres of arable, which consequently perform all the work of the grass besides. Ten to a farm of two hundred arable and one hundred grass are reckoned a very complete allowance ; and yet it is observable that the soil is a strong clay ; strong enough to yield great crops of beans ; and that many of the farms have much arable on the sides of hills, which makes the work pretty stout ; yet they plough their land very well, and never use more than two in a plough, although they do not break up their stubbles till after barley sowing. Through the best cultivated parts of *Suffolk* it is the same ;

but as to nine horses to every hundred acres, it is a monstrous allowance : considering that it includes light loams and sands, it is at least five too many ; so that more than double all the horses employed through this track of country are kept to no purpose. When good husbandry and extraordinary tillage are the consequence of numerous teams, the objection is answered ; but we very well know that is not the case, by clay farmers keeping no more than sand ones ; and by the depth of stirring being the same in all. It is custom, not good husbandry, that occasions any variations at all. To reflect, for one moment, that half the horses employed in husbandry through so considerable a part of the kingdom, are useless, is a very melancholy consideration ; that useless horses are pernicious to the public good, is a fact indisputable ; in no light whatever are they beneficial ; they have nothing to do with the exportation of horses, supposing it a trade ever so beneficial ; for it is consuming the commodity ones-self, which, in a commercial view, ought to be converted into money. It prevents the culture of a vast quantity of exportable corn. It takes great tracks of grass from fattening beasts, which yield plenty of butchers meat, and consequently enables us to export the more corn,

corn *, but gives no profit in return. No article of useful consumption is promoted by such extra horses ; no industrious hands employed by them ; in short, in every light the object can be viewed, the keeping such numbers of useless horses is a most pernicious conduct to agriculture, to the landlord, and to the public.

In the comparison between horses and oxen the balance of opinions is much in favour of the latter. In those countries, where both are used, and where the comparison has been accurately made, oxen have been found preferable, in every respect, but that of speed ; and even in that article their inferiority amounts to nothing more, than being two hours in a day longer at work than horses : they perform the same quantity every day, and in a better manner. Their being cheaper, in all respects, is allowed every where : and yet,

* Whenever I speak of the exportation of corn, it is relative to what *was* our policy, not to the wretched system of eternally stopping the export upon every mob that infests the street ; or every mob-address that demands pernicious measures. Wheat is now, within fifteen miles of the capital, at 4*s.* 3*d.* a bushel. Through all the eastern part of the kingdom every sort of corn is a drug ; much barley at 8*s.* a quarter ; some oats a guinea a last ; but *no exportation*. No trade will bear such rough usage as our corn trade has received of late years : It was once our boast — but now our folly.

notwithstanding all these advantages, they are used in very few places; and in some whole counties, that not many years ago scarcely possessed a plough-horse, now have not a single ox. This seems very extraordinary, and has, by many, been esteemed as a strong proof, that horses are really preferable.

But I think the change is to be accounted for without this supposition. I attribute it to the price live cattle have yielded of late years. It is well known, that the regular course of business in the ox counties used to be, to keep three sets of beasts; one of young cattle that were coming into work; the teams; and fattening cattle, that had been worked three years. But when cattle came to be so very dear, as to be bought lean for near as much as they sold for when fat, the ox farmers were tempted to sell their young stock before they ploughed them; or at least to throw them directly to fattening, that their high value might come in the sooner. And as horses, once bought, required no annual addition, they by degrees increased with all poor farmers, to enable them to sell their oxen at high prices. The great decrease of the use of oxen just during the period of live cattle selling so very high, gives some reason to suppose this the cause

cause of it. I need not, surely, add, that this, or indeed any other reason that can be offered, is and must be false and incomplete; and that the use of them in tillage is much superior to that of horses. The avarice of the farmers (it is observable among the great farmers in *Northumberland*, who, we are certain, are not *poor*, oxen yet continue to be much used, *viz.* half and half,) has alone driven them out of use, not for the sake of profit, but for raising ready money at a future expence.

Several modern *French* authors, of considerable abilities, have attacked the use of oxen with all their power; particularly the celebrated Marquis *de Mirabeau*, and the authors of the husbandry articles in the *Encyclopædiæ*; I think M. *Quesnay le fils*, and M. *le Roy*. They divide the agriculture of *France* into two grand parts; the *great* culture, and the *small*. The first is that of horses, and the latter of oxen; and reckon the small to exceed the great culture, in common practice, as five, if I recollect right, to thirty. They represent the use of oxen as vastly inferior to that of horses; but their arguments run directly counter to all ones ideas in *England*; consequently circumstances vary prodigiously between the two kingdoms. But the prin-

cipal objection seems, from those writings, rather to lye against the nature of the ox-teams than against their use in general. From many expressions, I apprehend the ploughing oxen to be very small, lean, weak, wretched beasts; for they talk of turning them on to open commons for their food: if this is the case, no wonder the ox culture is so unprofitable*.

* I have not the *Encyclopediæ* by me; but M. de Mirabeau writes as follows: “ Dans la grande culture, un homme seul conduit une charrue tirée par deux chevaux, qui fait *autant de travail que trois char-ruës tirée par des bœufs, & conduite par six hommes.* Dans ce dernier cas, faute d’avances primitives pour l’établissement d’une grande culture, la dépense annuelle est excessive par proportion au produit net, qui est presque nul, & l’on y employe dix ou douze fois plus de terre. Les propriétaires manquent de fermiers en état de subvenir à la dépense d’une bonne culture, les avances se font aux dépens de la terre; le produit des prés est consommé pendant l’hiver par les bœufs de labour, & on leur laisse une partie de la terre pour leur pâturage pendant l’été; le produit net de la récolte approche si fort de la nonvaleur que la moindre imposition fait renoncer à ces restes de la culture; ce qui arrive même est bien des endroits tout simplement par la pauvreté des habitans. — Ce détail d’agriculture se trouvera combattu par l’habitude & par le préjugé local dans bien des lieux. Vous entendez dire aux notables même parmi les nations pauvres qui sont reduites à cette petite culture dans les trois quarts de leur territoire, & où il y a d’ailleurs plus d’un tiers de terres cultivables qui sont en non valeur. On assure, dis-je, dans

dans ces pays là que la grande culture n'est pas propre à leurs terres ; qu'elles sont ou trop compactes ou trop légères pour les chevaux impatiens ; qu'ils nourrissent leurs bœufs avec presque rien pendant tout l'été, en les laissant enherber dans les jonquiers ou pâturaux ; qu'il ne leur faute ni avoine, ni orge, ni fers, ni harmois conteux, & autres objections qui sont autant d'argumens de la misère raisonnée." *L'ami des Hommes*, tome vi. p. 91.

What would M. de Mirabeau say if I informed him, that I used ox-teams for ploughing, in *Suffolk*, of only two oxen to a plough, that equalled my best horses in quantity of work performed *per diem* ; did it in the same hours ; in a better manner ; and at a less price *per acre*, the driver included : The oxen cost 15 *l.* a pair, and they out-ploughed horses of 30 *l.* a pair.

LET-

L E T T E R XXXV.

I HAVE no apprehensions of your thinking it useless to review the state of grafs land: The whole conduct of it is certainly of great importance; and the averages into which its value, product, &c. may be drawn, will prove one of the principal parts of that complete knowledge of the state of agriculture, which is the aim of this work. I shall begin with cows.

From Hatfield to Welwyn.

Product per cow. 5 l.

Stevenage to Luton.

Product. 4 l. 10 s.

From Dunstable to Wooburn; Milton.

Product. 4 l.

Wooburn to Newport Pagnel.

Product. 4 l.

Quantity of food per cow, One acre
of grafs.

St. Neot's to Kimbolton.

Product. 4 l.

From York to Beverley; Wilbersfort.

Product. 3 l. 10 s.

About Stillingfleet.

Product. 4 l.

Quan-

Quantity of milk *per diem*. Four gallons.

At *Thorne*.

Product. 5 *l*.

Around *Wentworth House*.

Food. Two acres. In winter two tons and half of hay.

Milk. Three gallons.

Product. 4 *l*.

Hogs maintained by cows. Three or four to six cows.

About *Driffeld*.

Rent of good grass. 20 *s*.

Food. An acre and a quarter.

Product. 5 *l*.

Milk. Two gallons.

About *East Newton*.

Rent. 20 *s*.

Food. Two acres. In winter two tons of hay.

Product. 4 *l*. 5 *s*.

Milk. Four gallons.

Hogs. Three to ten cows.

Number of cows to a dairy-maid. Ten.

Around *Nunnington*.

Rent. 10 *s*.

Product. 5 *l*.

Milk. Four gallons and a half.

Hogs. One to three cows.

Food.

Food. Two acres. Two loads and a half of hay in winter.

Dairy-maid. Twenty cows, with a girl.

About Kirkleatham.

Rent. 25s.

Food. An acre.

Product. 5l.

Milk. Five gallons.

At Gilsdale in Cleveland.

Rent. 25s.

Food. One acre.

Product. 5l.

Milk. Five gallons.

Hogs. One to two cows.

Around Schorton.

Rent. 20s.

Food. Two acres. One ton and fifteen cwt. of hay in winter.

Product. 6l.

Milk. Three gallons and a half.

Hogs. Four to ten cows.

Gilling near Richmond.

Rent. 35s.

Food. One acre, and an acre of hay.

Product. 5l.

Milk. Six gallons.

Hogs. Two pigs to a cow.

Maid. Twelve cows.

At Rookby.

Rent. 20s.

Food.

Food. Three roods, and one acre and a half of hay.

Product. 5*l*.

Milk. Four gallons.

Hogs. Ten pigs to four cows.

Maid. Seven cows.

From *Askrig* to *Reeth*, *Fremington*.

Rent. 30*s*.

Food. One acre, and one acre and a half of hay.

Product. 5*l*. 10*s*. and suppose the calf 1*l*. 6*l*. 10*s*.

About *Kiplin*.

Rent. 22*s*. 6*d*.

Food. One acre and a half, and two tons of hay.

Product. 5*l*.

Milk. Four gallons.

Hogs. Three to ten cows.

Maid. Ten cows.

Mr. *Crowe's* husbandry.

Food. One acre. Forty stone of hay.

Milk. Two gallons.

About *Swinton*.

Rent, 22*s*. 6*d*.

Food. One acre and a half, and two of hay.

Milk. Four gallons.

Product. 5*l*.

Hogs. Three or four to ten cows.

Maid. Eleven cows.

About

About Craikbill.

Rent. 20s.

Food. One acre and a half, and two of hay.

Product. 7 l. 7 s.

Hogs. Three or four to ten cows.

Maid. Ten cows.

About Slenningford.

Rent. 20s.

Food. Two acres and a half, and four of hay. (A fine cow country!)

Product. 6 l.

Milk. Four gallons.

Hogs. A pig to every cow.

Maid. Seven cows.

About Danby.

Rent. 25s.

Food. Five roods.

Product. 6 l. 7 s.

Milk. Seven gallons.

Hogs. Five to ten cows.

Maid. Ten cows.

About Afsarth.

Rent. 27s. 6 d.

Food. One acre, and two acres of hay.

Product. 4 l. 12s. 6 d.

Milk. Five gallons.

Hogs. Two or three to ten.

Maid. Five or six cows.

Earl of Darlington's.

Product. Eight gallons.

About

About Raby-Castle.

Rent. 30 s.

Food. One acre and a half, two tons of hay.

Product. 5 l.

Milk. Five gallons.

Hogs. Three or four to ten.

Maid. Fourteen cows.

Gosworth, near Newcastle.

Rent. 30 s.

Food. One acre and a half; two tons of hay.

Milk. Five gallons.

Product. 5 l.

Hogs. None.

Maid. Seven cows.

About Morpeth.

Rent. 20 s.

Food. One ton and a half of hay.

Product. 9 l. 10 s.

Milk. Nine gallons.

Hogs. Five or six to ten cows.

Maid. Ten cows.

About Alnwick.

Rent. 40 s.

Food. One acre, and one and a half of hay.

Product. 7 l.

Hogs. One few to ten cows.

Around

Around Belford.

Rent. 20s.

Food. One acre, and one ton and a half of hay.

Produce. 4l.

Milk. Six gallons.

Hogs. Nine or ten to eight cows.

Maid. Ten cows.

Hetton, near Belford.

Rent. 20s.

Product. 4l. 4s.

Milk. Five gallons.

Food. One ton and three quarters of hay.

Hogs. One to two cows.

Maid. Twelve cows.

Fenton, near Wooller.

Rent. 20s.

Food. One acre and a half, two tons of hay.

Product. 3l.

Milk. Four gallons.

Hogs. Two pigs to one cow.

About Rothbury.

Rent. 21s.

Food. One acre, half an acre of hay.

Product. 4l. 15s.

Milk. Six gallons and a half.

Hogs. Two to five or six cows.

About

About Cambo.

Rent. 22 s. 6d.

Food. One acre and a half. One acre
and a half ditto of hay.

Product. 4 l. 15 s.

Hogs. Three or four to ten cows.

About Glenwelt.

Rent. 20 s.

Food. One acre. And one ton of hay.

Product. 4 l.

Milk. Four gallons.

Hogs. Two to twelve cows.

Maid. Ten cows.

Ascot, south of Carlisle.

Rent. 20 s.

Food. One acre and a half. And one
ton and a half of hay.

Product. 55 s.

Milk. Three gallons.

Hogs. None.

Maid. Ten cows.

About Penrith.

Rent. 17 s. 6d.

Food. One acre. One ton of hay.

Product. 4 l. 10 s.

Hogs. Two to ten cows.

Maid. Ten cows.

Around Keswick.

Rent. 30 s.

Food. One acre and a half. And two
ton of hay.

Product. 3*l.* 13*s.* 6*d.*

Milk. Six gallons.

Hogs. One to ten cows.

About *Shapp.*

Rent. 22*s.* 6*d.*

Food. One acre. One and a half of hay.

Product. 5*l.*

Milk. Four gallons.

Hogs. None.

At *Holme*, near *Burton.*

Rent. 50*s.*

Food. Five roods.

Product. 6*l.* 13*s.*

Milk. Four gallons.

Hogs. Two or three to ten cows.

Maid. Eight cows.

About *Kabers.*

Rent. 26*s.*

Food. One acre and a quarter. One and a quarter of hay.

Product. 4*l.*

Milk. Six gallons.

Hogs. One pig to two cows.

Maid. Ten or twelve cows.

About *Garflang.*

Rent. 32*s.* 6*d.*

Food. One acre and a quarter. One acre of hay.

Product. 3*l.* 15*s.*

Hogs. None.

From

From *Warrington* to *Prescot*.

Product. 3*l.*

Around *Ormskirk*.

Rent. 30*s.*

Food. Two acres. And one hundred
and twenty stone (20*lb.*) hay.

Milk. Six gallons.

Hogs. Two or three to ten cows.

Maid. Ten cows.

At *Altringham*.

Rent. 30*s.*

Food. One acre. Three quarters of an
acre of hay.

Product. 5*l.*

Milk. Five gallons.

Hogs. Two or three to twenty-six
cows.

Maid. Seven or eight cows.

Around *Knotsford*.

Rent. 25*s.*

Food. One acre and a half. Two tons
of hay.

Product. 6*l.*

Milk. Four gallons.

Hogs. Three to twenty.

Maid. Fifteen cows.

About *Holmes-Chapel*.

Rent. 30*s.*

Food. One acre and a half.

Milk. Five gallons.

Product. 6*l.*

X 2

Hogs.

Hogs. Three or four to ten cows.

Maid. Seven cows.

Around *Stone*.

Rent. 30 s.

Food. One acre. And twelve cwt.
and a half of hay.

Product. 5 l.

Milk. Five gallons.

Hogs. Four to ten cows.

Maid. Ten cows.

Around *Shenstone*.

Rent. 22 s. 6 d.

Food. One acre. Fifteen cwt. of hay.

Product. 5 l. 15 s.

Milk. Six gallons.

Hogs. Six to twenty cows.

Maid. Ten cows.

At *Aston*, near *Birmingham*.

Rent. 30 s.

Product. 8 l.

Milk. Six gallons and a half.

Food. Three cwt. of hay per week.

Around *Hagley*.

Rent. 50 s.

Food. One acre. And one ton of hay.

Product. 6 l. 5 s.

Milk. Four gallons and a half.

Hogs. Two pigs to three.

Maid. Seven cows.

About *Broomsgrove*.

Product. 3 l. 10 s.

Milk.

Milk. Four gallons.

At Bendsworth, near Evesham.

Rent. 35 s.

Food. One acre.

Product. 5 l.

Milk. Five gallons.

Hogs. Two sows to ten.

Maid. Eight cows.

At Benfington.

Rent. 50 s.

Food. One acre. And one acre and a half of hay.

Product. 7 l. 7 s.

Maid. Ten cows.

About Henley.

Product. 6 l.

Maidenhead.

Product. 7 l. 10 s.

North Mims.

Rent. 20 s.

Food. One acre and a half. Two loads of hay.

Product. 6 l.

Milk. Two gallons and a half.

Hogs. Three sows to ten.

Maid. Eight or nine.

Having thus collected all the intelligence concerning cows into one point of view, I shall, in the next place, calculate such averages as appear to be the most useful; the standard, whereby we must judge of

the various articles, is that of product; by taking that for a guide, we shall be able to see what proportion those articles bear to product; which will at once discover such as are most beneficial.

Product under 4l.

Places.	Rent. s. d.	Sum. food.	Win. food.	Product.	Milk.	Hogs.	Maids.
<i>Wilbersfort,</i>				3 10			
<i>Fenton,</i>				3 0	4	4	
<i>Ascot,</i>	20	$1\frac{1}{2}$	$1\frac{1}{2}$	2 15	3	none	10
<i>Keswick,</i>	30	$1\frac{1}{2}$	$1\frac{1}{3}$	3 13 6	6	1	
<i>Garflang,</i>	32 6	$1\frac{1}{4}$	1	3 15		none	
<i>Prescot,</i>				3 0			
<i>Broomsgrove,</i>				3 10	4		

I have, in this table, simplified the articles as much as I could. The number of hogs one reckoned to ten cows; and the winter food, when specified in weight, I change to acres, (as it is absolutely requisite for drawing an average,) by the general rule of one hundred of hay for each shilling of rent; and when no rent specified, a ton and an half per acre; five pigs I call a hog, and a sow three hogs.

Averages, 27 6 | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 3 6 2 | 4 | 1 | 10

Product at 4 l. and upwards, under 5 l.

Places.	Rent.	Sum.	Win.	Product.	Milk.	Hogs.	Maids.
s.	d.	food.	food.				
Luton,				4 10			
Milton,				4 0			
Newport,		1		4 0			
Kimbolton,				4 0			
Stillingfleet,				4 0	4		
Wentworth,		2	1 $\frac{2}{3}$	4 0	3	6	
East Newton,	20	2	2	4 5	4	3	10
Asgarth,	27 6	1	2	4 12 6	5	2 $\frac{1}{2}$	5 $\frac{1}{2}$
Belford,	20	1	1 $\frac{1}{2}$	4 0	6	10	10
Hetton,	20		1 $\frac{3}{4}$	4 4	5	5	12
Rothbury,	21	1	$\frac{1}{2}$	4 15	6 $\frac{1}{2}$	4	
Cambo,	22 6	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 15		3 $\frac{1}{2}$	
Glenwelt,	20	1	1	4 0	4	2	10
Penrith,	17 6	1	1	4 10		2	10
Kabers,	26	1 $\frac{1}{4}$	1 $\frac{1}{4}$	4 0	6	1	11
Averages,	21 6	1 $\frac{1}{4}$	1 $\frac{1}{4}$	4 0 9	4 $\frac{3}{4}$	4	9

X 4

Product

Product at 5 l. and upwards, under 6l.

Places.	Rent. s. d.	Sum. food.	Win. food.	Product.	Milk.	Hogs.	Maids.
<i>Welwyn,</i>				5 0			
<i>Tborne,</i>				5 0			
<i>Driffield,</i>	20	1 $\frac{1}{4}$		5 0	2		
<i>Nunnington,</i>	10	2	5	5 0	4 $\frac{1}{2}$	3	15
<i>Kirkleatbam,</i>	25	1		5 0	5		
<i>Gilsdale,</i>	25	1		5 0	5	5	
<i>Gilling,</i>	35	1	1	5 0	6	4	12
<i>Rookby,</i>	20	$\frac{1}{2}$	1 $\frac{1}{2}$	5 0	4	5	7
<i>Kiplin,</i>	22 6	1 $\frac{1}{2}$	2	5 0	4	3	10
<i>Swinton,</i>	22 6	1 $\frac{1}{2}$	2	5 0	4	3 $\frac{1}{2}$	11
<i>About Raby,</i>	30	1 $\frac{1}{2}$	1 $\frac{1}{2}$	5 0	5	3 $\frac{1}{2}$	14
<i>Gosworth,</i>	30	1 $\frac{1}{2}$	1 $\frac{1}{2}$	5 0	5	none	7
<i>Shapp,</i>	22 6	1	1 $\frac{1}{2}$	5 0	4	none	
<i>Altringham,</i>	30	1	$\frac{1}{2}$	5 10	5	1	7 $\frac{1}{2}$
<i>Stone,</i>	30	1	$\frac{1}{2}$	5 0	5	4	10
<i>Shenstone,</i>	22 6	1	$\frac{1}{2}$	5 15	6	3	10
<i>Bendsworth,</i>	35	1		5 0	5	6	8
<i>Averages,</i>	31 9	1	1 $\frac{1}{2}$	5 1	4 $\frac{1}{2}$	3	10

Product

Product at 6 l. and upwards, under 7 l.

Places.	Rent. s. d.	Sum. food.	Win. food.	Product.	Milk.	Hogs.	Maids.
<i>Schorton,</i>	20	2	1 $\frac{1}{4}$	6 0	3 $\frac{1}{2}$	4	
<i>Fremington,</i>	30	1	1 $\frac{1}{2}$	6 10			
<i>Sleningford,</i>	20	2 $\frac{1}{2}$	4	6 0	4	2	7
<i>Danby,</i>	25	1 $\frac{1}{4}$		6 7	7	5	10
<i>Holme,</i>	50	1 $\frac{1}{4}$		6 13	4	2 $\frac{1}{2}$	8
<i>Knotsford,</i>	25	1 $\frac{1}{2}$	1 $\frac{1}{4}$	6 10	4	1 $\frac{1}{2}$	15
<i>Holm's chapel</i>	30	1 $\frac{1}{2}$		6 5	5	3 $\frac{1}{2}$	7
<i>Hagley,</i>	50	1	$\frac{1}{2}$	6 5	4 $\frac{1}{2}$	1 $\frac{1}{2}$	7
<i>Henley,</i>				6 0			
<i>Mims,</i>	20	1 $\frac{1}{2}$	2	6 0	2 $\frac{1}{2}$	9	8
<i>Averages,</i>	30	1 $\frac{1}{4}$	1 $\frac{1}{4}$	6 8	4 $\frac{1}{4}$	3 $\frac{1}{2}$	9

Product at 7 l. and upwards.

<i>Craikbill,</i>	20	1 $\frac{1}{2}$	2	7 7		3 $\frac{1}{2}$	10
<i>Morpeth,</i>	20		1 $\frac{1}{2}$	9 10	9	5 $\frac{1}{2}$	6
<i>Alnwick,</i>	40	1	1 $\frac{1}{2}$	7 0		3	
<i>Aston,</i>	30		1 $\frac{1}{4}$	8 0	6 $\frac{1}{2}$		
<i>Bensington,</i>	50	1	1 $\frac{1}{2}$	7 7			10
<i>Maidenbead,</i>				7 10			
<i>Averages,</i>	32	1	1 $\frac{1}{2}$	7 15 6	7 $\frac{1}{4}$	4	8

Such

Such tables as these you must not expect to be minutely exact to the splitting of fractions; such accuracy is not requisite; since the proportions are what is chiefly wanted, and while one degree of exactness runs through all, they remain the same.

Recapitulation.

Averages	Rent.	Sum. fooc.	Win. fooc.	Product.	Milk.	Hogs.	Maids.
of upwards of 7 <i>l</i> .	32	1	$1\frac{1}{2}$	7 15 6	$7\frac{3}{4}$	4	8
Of 6 <i>l</i> .	30	$1\frac{1}{4}$	$1\frac{3}{4}$	6 8 0	$4\frac{1}{4}$	$3\frac{1}{2}$	9
Of 5 <i>l</i> .	31 9	1	$1\frac{1}{2}$	5 1 0	$4\frac{1}{2}$	3	10
Of 4 <i>l</i> .	21 6	$1\frac{1}{4}$	$1\frac{1}{4}$	4 0 9	$4\frac{3}{4}$	4	9
Under 4 <i>l</i> .	27 6	$1\frac{1}{4}$	$1\frac{1}{4}$	3 6 2	4	1	10
Gen. Average	28 4	$1\frac{1}{2}$	$1\frac{1}{2}$	5 6 3	5	3	9

It

It is in the first place to be remarked on this table, that the variation of product does not depend totally on the richness of the grass; though there is something of a proportion between them. The highest product is from the best grass; and the two next products are from the next rents in the scale; but below that the regularity is broken, and 21 s. 6 d. exceeds 27 s. 6 d. The richness of the land has, therefore, a pretty considerable effect, though it does not bear an unbroken proportion.

From 4 l. to 6 l. product, the quantity of milk is pretty equal; but 7 l. and upwards has a corresponding superiority in the milk.

There is not much proportion to be found in the quantity of either summer or winter food.

In the number of hogs also no variations are discovered, which could occasion those of product.

The general average is in this table, as in all similar enquiries, of particular importance. We find from it, that the average rent of good grass land, throughout the tour, is 28 s. 4 d. and we find that the mean product of cows is 5 l. 6 s. 3 d. Likewise, that the average of cows eat the product of very near two acres and a half

half of grass, at 28 s. 4 d. *per acre*. That five gallons is the mean quantity of milk *per cow per diem*; and three hogs the number maintained by ten cows. Even the knowledge that nine is the number managed by one dairy-maid is a point of some consequence, as it discovers that part of the expence of dairies.

It appears, upon the whole, that cows are by no means, as they are commonly managed, profitable. Two acres and a half of this average grass come to 2 l. 16 s. 8 d. in rent alone, besides all other charges, and making half of it into hay; a dairy-maid cannot be reckoned at less than 9 l. board and wages, or 20 s. a cow. Here is above 4 l. besides all the firing, and wear and tear of the utensils, and other labour; all which, I am clear, must amount to above 5 l. It is extremely mysterious, but I cannot possibly discover wherein, according to this general view, lies the profit of these dairies. And this leads me to point out the reasons why the advantage is nothing, or at least, so small.

In the first place, the average quantity of hay eat in the winter (very near an acre and a half,) is one immense deduction from product. The very rent of the land on which it grows is 2 l. 2 s. This heavy expence is, four parts in five, incurred for
want

want of other winter food. In some countries they have not turneps to feed them with when dry; but in very few have they a green food for such as give milk, that will not make it taste. In this view appears the importance of any vegetable of this sort, either cabbages, carrots, parsnips, potatoes, &c. The two first, we have already found, will certainly perform this office; and as they are raised in perfection on different soils; the two including every sort in *England*; no farmer need ever more be under the costly necessity of feeding his cows with such quantities of hay; which is evidently one material reason why the profit of cows is no greater.

In the next place we find, by the preceding table, that three hogs are the average number to ten cows; not three sows, (nor pigs,) but half, or three fourths, or full grown; *keeping* with design to fat. That this is a strange reduction of the profit of a dairy, will easily be believed by those who have been used to a better practice. It is a common thing in *Essex*, *Suffolk*, and *Norfolk*, to see a herd of two or three hundred swine, of all sorts, in a farm that keeps thirty or forty cows: They will keep at the rate of three or four sows to twelve cows, and all the pigs and hogs bred by them: But this is by applying the
dairy

dairy food only to keeping fows and pigs, and pigs that are weaning : And this practice I cannot but strongly recommend to most of the farmers in this extensive track of country, who make so small a profit by their cows for want of applying their dairy wash to the best advantage.

I am guilty of no exaggeration when I assert, that a different conduct in these two points, of *hogs*, and *winter food*, would increase the farmer's profit by near 3 l. a cow.

* * * * *

It is absolutely requisite to take the same review of Sheep, their product and profit, as we have done with Cows : The result will be equally useful ; both must be clearly known, before any one can pretend to consider the true political state of the kingdom at large. I consider myself as collecting *data* for politicians to calculate upon : I shall at least give them some authorities which they have not yet possessed.

From *Stamford* to *Grimsthorpe*.

Fold their sheep ; a thousand to an acre and half. An hundred and fixty in a summer fold twenty acres.

About *Risby*.

Flocks. From a hundred and twenty to two hundred.

At

At Stillingfleet.

Price. 11s. 6d. Sell at 25s. 6d.

Profit. 14s.

About Thorne.

Profit. 4s.

About Wentworth House.

Flocks. From ten to thirty.

Profit. 8s. 6d.

Beverley to Scarborough; about Driffield.

Flocks. From three hundred to five hundred.

Profit. Folding the chief.

Fleece. 3 lb. and half.

About Ganton.

Flocks. Three hundred to a thousand.

Fleece. 3 lb. at 8d.

About East Newton.

Flocks. From twenty-five to three hundred.

Profit. 11s. 9d.

Fleece. 5 lb. and half.

At Nunnington.

Flocks. Twenty to eighty.

Profit. 8s. 6d.

Fleece. 5 lb.

Mr. Turner's, in Cleveland.

Fleece. 10 lb.

About Kirkleatham.

Flocks. From twenty to sixty.

Profit. 11s.

Fleece.

Fleece. 8 lb.

At Gilsdale, in Cleveland.

Flocks. From fifty to five hundred.

Profit. 5 s.

Fleece. 10 d. each.

About Schorton.

Flocks. From ten to two hundred.

Profit. 22 s. 6 d.

Fleece. 8 lb.

Richmond to Greta-Bridge; Gilling.

Flocks. From twenty to two hundred.

Profit. 12 s.

Fleece. 7 lb.

At Rookby.

Flocks. From twenty to three hundred.

Profit. 5 s.

Fleece. 7 lb.

*From Askrig to Richmond; at Fre-
mington.*

Flocks. To five hundred.

Profit. 10 s.

Fleece. 3 lb. and half, at 7 d.

Kiplin.

Flocks. From twenty to two hundred.

Profit. 21 s.

Mr. Crowe.

Profit. 25 s.

Fleece. 8 lb. at 10 d.

About Swinton.

Flocks. From twenty to sixty.

Profit.

Profit. 10 s.

Fleece. 4 lb. and half.

Around *Craikhill*.

Flocks. From twenty to eighty.

Profit. 15 s.

Fleece. 6 lb.

About *Slenningsford*.

Flocks. Twenty to thirty.

Profit. 15 s.

Fleece. 4 lb. and half.

About *Danby*.

Flocks. From fifty to three hundred.

Profit. 8 s.

Fleece. 6 lb. and half.

About *Asgarth*.

Flocks. From thirty to four hundred.

Profit. 8 s. 4 d.

Fleece. 4 lb. at 9 d. $\frac{1}{4}$.

Earl of *Darlington*.

Profit. 1 l. 8 s. 6 d.

Fleece. 12 lb.

Around *Raby Castle*.

Flocks. From thirty to two hundred.

Profit. 13 s.

Fleece. 9 lb.

At *Gosworth*, near *Newcastle*.

Flocks. From forty to eighty.

Profit. 15 s.

Fleece. 5 lb.

About *Morpeth*.

Flocks. From thirty to an hundred.

Profit. 10s.

Fleece. 3 lb.

At Belford.

Flocks. From one hundred to six hundred.

Profit. Fatting, 14s. Stock, 7s. 8d.

Fleece. 4 lb. at 7d. $\frac{1}{2}$.

At Hetton.

Flocks. From three hundred to two thousand.

Profit. 5s.

Fleece. 7 lb. at 7d.

At Fenton, near Wooller.

Flocks. From five hundred to ten thousand.

Profit. 8s. in the vales; and 3s. on the hills; average 5s. 6d.

Fleece. 3 to 7 lb. in the vales; from two to four on the hills; at from 6d. to 9d.

About Rothbury.

Flocks. From forty to four thousand.

Profit. 7s.

Fleece. 4 lb. and half.

Around Cambo.

Flocks. From an hundred to a thousand.

Profit. 8s.

About Glenwelt.

Flocks. From twenty to five hundred.

Profit.

Profit. 5 s.

Fleece. 3 lb.

Ascott, south of Carlisle.

Flocks. From twenty to an hundred
and twenty.

Profit. 6 s.

Fleece, 4 lb. at 3 d.

About Penrith.

Flocks. From forty to three thousand.

Profit. 5 s.

Fleece. 3 lb. at 4 d.

Around Keswick.

Flocks. From an hundred to a thou-
sand.

Profit. 4 s. 3 d.

Fleece. 4 lb. at 4 d.

About Shapp.

Flocks. From five to fifteen hundred.

Profit. 5 s.

Fleece. 3 lb. and half, at 3 d.

At Holme, near Burton.

Flocks. From twenty to an hundred
and fifty.

Profit. 5 s. 6 d.

Fleece. 6 lb. and half, at 4 d.

About Kabers.

Flocks. From twenty to four hundred.

Profit. 7 s. 9 d.

Fleece. 3 lb.

Around Garflang.

Flocks. From twenty to two hundred.

Profit. 4 s. 6 d.

Fleece. 3 lb.

Around Ormskirk.

Flocks. From twenty to an hundred.

Profit. 10 s.

Fleece. 2 lb.

Near Altringham.

Flocks. From twenty to two hundred.

Profit. 10 s.

Fleece. 4 lb. and half.

About Shenstone.

Flocks. From ten to two hundred.

Profit. 14 s.

Fleece. 8 lb.

Aston, near Birmingham.

Profit. 8 s.

Fleece. 3 lb.

Around Hagley.

Flocks. From forty to a thousand.

Price 11 s. Sell at 22 s. Profit 11 s.

in inclosures; but on commons,
2 s. 3 d.

Worcester to Evesham; at Pershore.

Flocks. From eighty to two hundred.

Profit. 10 s.

Bendsworth, near Evesham.

Flocks. From sixty to twelve hundred.

Profit. 8 s. 6 d.

Fleece. In inclosures 9 lb. in open
fields 3 lb. and half.

Around

Around Moreton.

Flocks. From one hundred to fourteen hundred.

Profit. 7 s. 6 d.

At Benfington.

Flocks. From an hundred to a thousand.

Profit. 20 s.

Fleece. 6 lb.

At Harmondsworth, Middlesex.

Profit. 12 s.

About North Mims.

Flocks. From twenty to three hundred.

Profit. 9 s. 6 d.

Fleece. 4 lb.

The next view we take of this part of rural œconomics, must be the profit, &c. relative to the soil. But there are not the same reasons, in this case, for taking the rent only of grass land, as with cows; for sheep live in many counties as much off the arable as the grass: Rent must, therefore, be the average of the country at large, that we may discover how far the present state of the flocks in *England* are regulated in value by the soil. Taking a general view of each article, upon this principle, will present us with numerous facts that are of consequence.

Rent 10s. and under.

Places.	Rent. s. d.	Flocks.	Profit. s. d.	Fleece.	Price.
Risby,	9 3	120 to 200			
Stillingfleet,	10		14		
Thorne,	10		4		
Wentworth,	8	10	30 8 6		
Driffeld,	10	300	500		2.
Ganton,	1	300	1000	3	8
Nunnington,	5 10	20	80 8 6	5	
Mr. Turner,	8 4			10	
Schorton,	10	10	200 22 6	8	
Sleningsford,	8	20	30 15	4 $\frac{1}{2}$	
Hetton,	6 6	300	2000 5	7	7
Fenton,	8	500	10000 5 6	4	7 $\frac{1}{2}$
Pennith,	8 9	40	3000 5	3	4
Averages,	8		9 9	5 $\frac{1}{2}$	6 $\frac{1}{2}$

Rent from 10s. to 20s.

East Newton,	12	25 to 300	11 9	5 $\frac{1}{2}$	
Kirkcatham,	13	20	60 11	8	
Gilfdale,	10 6	50	500 5		
Gilling,	20	20	200 12	7	
Rookby,	12	20	300 5	7	
Kiplin,	12 6	20	200 21		

Mr.

Places.	Rent. s. d.	Flocks.	Profit. s. d.	Fleece.	Price.
Mr. Crowe,	12 6		25	8	10
Swinton,	16 6	20 to 60	10	4½	
Craikhill,	13	20 80	15	6	
Danby,	12 6	50 300	8	6½	
Asgarth,	20	30 400	8 4	4	9½
Lord Dar- lington, }	16		28 6	12	
About Raby,	16	30 200	13	9	
Gosworth,	20	40 80	15	5	
Morpeth,	12	30 100	10	3	
Belford,	15	100 600	10 10	4	7½
Rothbury,	10 6	40 4000	7	4½	
Cambo,	15	100 1000	8		
Glenwelt,	12 6	20 500	5	3	
Ascot,	15	20 120	6	4	3
Shapp,	10 6	5 1500	5	3½	3
Kabers,	17	20 400	7 9	3	
Garstang,	17	20 200	4 6	3	
Ormskirk,	15	20 100	10	2	
Altringham,	20	20 200	10	4½	
Shenstone,	15	10 200	14	8	
Aston,	17 6		8	3	
Hagley,	20	40 1000	6 7		
Perthore,	15	80 200	10		
Moreton,	20	100 1400	7 6		

Places.	Rent. s. d.	Flocks.	Profit. s. d.	Fleece.	Price.
<i>Harmondsworth,</i>	20		12		
<i>Mims,</i>	12	20 to 300	9 6	4	
<i>Averages,</i>	15		10 8	5	6½

Rent upwards of 20 s.

<i>Fremington,</i>	30	to 500	10	3½	7
<i>Keswick,</i>	25	100 1000	4 3	4	4
<i>Holme,</i>	21	20 150	5 6	6½	4
<i>Bendsworth,</i>	22 6	60 1200	8 6	6¼	
<i>Bensington,</i>	25 6	100 1000	20	6	
<i>Averages,</i>	25		9 8	5	5

Recapitulation.

10s. and under,	8		9 9	5½	6
Ditto to 20 s.	15		10 8	5	6½
Upwards of 20s	25		9 8	5	5
Gen. Average,	16		10	5	5½

The

The comparison of soil with profit, in this table, turns out very different from what I expected. I supposed that the best land would prove in sheep the most profitable; but, on the contrary, the equality of the profit on all is very great; and the little variation there is, marks no proportion of profit to rent. In one respect we do not see clearly the matter of rent; the sums here specified are the rates of the places in general; but not of sheep-walks in particular: In the North, vast tracks of moors feed sheep; but it is impossible to specify the rent of certain tracks of a farm, which probably were never either measured or valued. Now in most of those extensive countries the flocks are kept upon the moors the year round, except just at turnepping; the rents do not, perhaps, exceed 1 *s.* or 2 *s.* *per acre*; but in the table they may be marked at 6 *s.* 8 *s.* 10 *s.* 12 *s.* &c. Now in all the moor farms I viewed, the profit by sheep is trifling, and their value very small; which circumstance being mixed with the products of much richer countries, of the same rent, their average is lowered; otherwise a proportion would probably appear between *soil* and *profit*.

The

The following division, according to profit, may be of use.

Profit 5s. and under.

Places.	Rent.	Flocks rise to	Profit.	Fleeced.
	<i>l. s. d.</i>		<i>s. d.</i>	
Thorne,	10 0		4	
Hetton,	6 6	2000	5	7
Penrith,	8 9	3000	5	3
Gilsdale,	10 6	500	5	
Rookby,	12	300	5	7
Glenwelt,	12 6	500	5	3
Shapp,	10 6	1500	5	3 $\frac{1}{2}$
Garstang,	17 0	200	4 6	3
Keswick,	1 5 0	1000	4 3	4
Averages,	0 12 6	1125	4 9	4 $\frac{1}{4}$

Profit from 5s. to 10s.

Wentworth,	8	30	8 6	
Nummington,	5 10	80	8 6	5
Fenton,	8 0	10000	5 6	4
Swinton,	16 6	60	10	4 $\frac{1}{2}$
Danby,	12 6	300	8	6 $\frac{1}{2}$

Asgarth,

Places.	Rent.		Flocks rise to	Profit.		Fleece.
	l.	s. d.		s.	d.	
<i>Asgarth,</i>	1	0 0	400	8	4	4
<i>Morpeth,</i>		12 0	100	10		3
<i>Belford,</i>		15 0	600	10	10	4
<i>Rothbury,</i>		10 6	4000	7		4 $\frac{1}{2}$
<i>Cambo,</i>		15 0	1000	8		
<i>Ascot,</i>		15 0	120	6		4
<i>Kabers,</i>		17 0	400	7	9	3
<i>Ormskirk,</i>		15 0	100	10		2
<i>Altringham,</i>	1	0 0	200	10		4 $\frac{1}{2}$
<i>Aston,</i>		17 6		8		3
<i>Hagley,</i>	1	0 0	1000	6	7	
<i>Pershore,</i>		15 0	200	10		
<i>Moreton,</i>	1	0 0	1400	7	6	
<i>Mims,</i>		12 0	300	9	6	4
<i>Fremington,</i>	1	10 0	500	10		3 $\frac{1}{2}$
<i>Holme,</i>	1	1 0	150	5	6	6 $\frac{1}{2}$
<i>Bendsworth,</i>	1	2 6	1200	8	6	6 $\frac{1}{4}$
Averages,		15 9	1051	8	4	4 $\frac{1}{4}$

Profit

Profit from 10s. to 15s.

Places.	Rent.			Flocks rise to	Profit.			Fleece.
	l.	s.	d.		l.	s.	d.	
Stillington,	10				14			
Sleningford,	8			30	15			4 $\frac{1}{2}$
East Newton,	12			300	11	9		5 $\frac{1}{2}$
Kirkleatham,	13			60	11			8
Gilling,	1	0	0	200	12			7
Craikbill,	13			80	15			6
Raby,	16			200	13			9
Gosworth,	1	0	0	80	15			5
Belford,	16			600	10	10		4
Sbenstone,	15			200	14			8
Harmsworth,	1				12			
Averages,	0	14	9	194	0	13	0	6

Profit from 15s. upwards,

Schorton,	10			200	1	2	6	8
Kiplin,	12	6		200	1	1	0	
Mr. Crowe,	12	6		150*	1	5	0	8
Lord Dar- lington, }	16			200*	1	8	6	12
Bensington,	1	5	6	1000	1	0	0	6
Averages,	0	15	3	350	1	3	4	8

* Small numbers supposed, being single farms.

Reca-

Recapitulation.

	Rent.		Flocks rise to	Profit.			Fleece.
	s.	d.		l.	s.	d.	
Profit 5s. and under, }	12	6	1125	0	4	9	4 $\frac{1}{4}$
Ditto 5s. to 10s.	15	9	1051	0	8	4	4 $\frac{1}{4}$
Ditto 10s. to 15s.	14	9	194	0	13	0	6
Ditto 15s. up- wards, }	15	3	350	1	3	4	8

There does not appear to be much proportion between rent and profit in this table ; but it has another use, which is not to be flighted. The two lowest averages of profit, those of 5s. and 10s. are much the greatest flocks ; which proves the very point I was before remarking, that the rents were not decided by the land applied to sheep. We find from the height to which the flocks rise, where the profit is low, that there must be large sheep-walks to maintain them, which sufficiently lets us into the nature of the country ; and explains that puzzling circumstance, the equality of rent. And this circumstance will appear very strong, if we throw together the two low articles of profit, and the two high ones, each in one average, thus:

Profit

	Rent.	Flocks rise to	Profit.	Fleeces
	s. d.		s. d.	
Profit to 10s.	14 1½	1088	6 6	4 ¼
Ditto from 10s. } upwards,	15	272	18 2	7

From this little sketch we at once find most of the contradictions removed; it appears, that rent must not be our guide to discover the nature of the soil, but the size of the flocks; for large flocks are rarely kept in rich countries; and this circumstance of rent being deceitful, arises, as I before remarked, from the wastes and wilds that maintain sheep chiefly not being characterized by the rent so much as the cultivated parts of the country. We find that the profit of sheep depends, at present, much upon the soil; for where flocks rise on an average to 1088, the profit is only 6s. 6d. but where they are not more numerous than 272, it rises to near three times as much; which is a remarkable difference.

The lowness of the profit through such an extensive tract as all these countries, in which it rises no higher than 10s. calls for some attention. Is 6s. 6d. an adequate return for a year's keeping of a sheep? Surely not. From whence comes, then, the lowness of this profit; which to appearance

appearance renders sheep an object of small importance? This is a question that comes immediately to the point.

Throughout the moor farms in several counties in the north of *England*, their breed of sheep is more paltry than can be well conceived in the south; so wretched, that it would be absurd to expect any considerable profit from them: In the moors of *Northumberland*, flocks rise to 40,000, which number is kept near the head of *North Tyne*, by one Mr. (I think) *Simon Kidder*, or some such name; many of these immense flocks are not reckoned to pay more than from 1*s.* to 3*s.* a head, and yet the cheese they make of them is reckoned. They milk the ewes, and use the butter for greazing their bodies in autumn to preserve the wool; the cheese they sell. Could any good farmer have supposed there had existed such a system of trifling? And all this for a profit of twelve-pence a head! But farther; would a *Norfolk* farmer believe, that men who rented farms from 500*l.* to 2000*l.* a year, who have vast tracts of arable land, and are able to keep from 5000 to 40,000 sheep, who take the minute and amazing trouble of milking their ewes; would any man conceive that these farmers should not know what a fold is? This is one of the most
asto-

astounding systems of barbarism that can any where be met with.

The fleeces of these sheep weigh from 1 lb. to 2, 2 $\frac{1}{2}$, and 3 lb. the quality of the wool very bad; in *Cumberland* and *Westmoreland* 3 d. or 4 d. per lb. What a loss is this to the state? To have whole counties of uncultivated land, without the possession of those rich fleeces which extended sheep-walks convey the idea of. These northern genius's assert, that their moors would not do for better sheep: the argument carries an absurdity in the very face of it: and those who know most of cattle will allow, as an universal maxim, that the poorer the soil the *better* ought the cattle to be; not the *larger*. A good breed of cattle, of any sort, that are not out of size, will, on the poorest soils, starve the poorer herds. But in this case facts have proved what reason only conjectures. Mr. *Culey*, of *Fenton*, near *Wooller*, has been at the expence of hiring tups of that famous breeder, Mr. *Bakewell*, of *Ditchley*, near *Loughborough*, in *Leicestershire*, by which means he has (I think in two years) so improved his flock, that all his neighbours are astonished, and some of them are now hiring tups of him at no trifling expence; convinced, at last, that no land is too poor to have a good stock on it. The profit by
sheep

sheep will, in that neighbourhood, soon be advanced five hundred *per cent.* This instance proves, that the breed in the *Moor* counties, ought, by all means, to be improved. It is a matter that equally concerns the landlord, the farmer, and the nation. The first is bound, by an hundred considerations, to exert himself in so important a matter; not to leave his tenants to continue in the old route, till an accidental man, from another part of the kingdom (the case with Mr. *Culey*,) arises among them, with better ideas than his neighbours. Improvements depend greatly on landlords: But when we view such millions of acres of improveable moors, as waste as when ravaged by the fury of the *Scottish* borderers: When we hear of flocks of forty thousand sheep, that, instead of folding, are *milked*, and the whole profit twelve-pence a head, we surely cannot but conclude, that the landlords are asleep. Were they frozen in the snows of *Cheviot*, their husbandry could not be more contemptible.

That the profit of sheep may be pushed very high, we find by the average above 15*s.* being 1*l.* 3*s.* 4*d.* which is considerable, the weight *per fleece* 8*lb*; this shews strongly the effect of having a good breed;

for to nothing else can the superiority be attributed: The rent of the soil is only 6*d.* an acre different from that of 10*s.* to 15*s.* profit, and the flocks are even larger; so that it can only be the breed that gives such a superiority of profit.

It is such extensive tracts of the kingdom being stocked with such bad kinds of sheep, that reduces the general average profit to so low as 10*s.* a head; the average fleece to 5*lb.* and the price to 5*d.* $\frac{1}{4}$. In this general light the evil appears strongly; for we find the medium less by more than half, to what it is in particular districts not peculiarly happy in soil.

Before I conclude, I must take notice of one circumstance in the minutes, of particular importance, which is, the amazing superiority of wool and profit in inclosed countries to open ones. It is very remarkable, that every one of the places minuted in the scales of profit, from 10*s.* upwards, are all in inclosed countries. And one or two minutes of comparison prove the same thing. About *Hagley*, the profit in inclosed grounds is 11*s.* but in open ones only 2*s.* 3*d.* which is a prodigious difference. About
Bendf-

Bendsworth, in the *Vale of Evesham*, the average fleece is 9 *lb.* in the inclosures; but only 3 *lb.* in the open fields. Can there be a stronger argument for inclosing? The common vulgar ideas, of injuring sheep and manufactures by inclosures, are hence, I think, sufficiently answered: By inclosing you have 9 *lb.* of wool instead of three, that is, one sheep yields as much as three did; and in respect to profit, one pays as much as five: Do these wise-acres think that inclosing the moors would do mischief to manufactures? or that lessening the number of sheep, that are milked instead of folded, and yield from one shilling to five or six profit *per head*, would lessen the quantity of *British* wool? Inclosures raise rents; high rents make men industrious; they put a thousand pounds in their pocket to go hire a farm, which, when open, would have taken only 3 or 400*l.* Every thing must be turned to good advantage when high rents are paid; the farmer knows that every thing *must* be profitable; and that very circumstance *renders them* so: In such a train will twelve-penny sheep be found? It is thus that inclosures act; and that lessening the number of sheep is increasing the quantity and value of wool.

But this is so evident that one cannot but admire at the prejudice or folly of some writers, who have harangued against them as the enemies of manufactures.

Another branch of the article *cattle*, is the expence of keeping horses, which is minuted in most parts of the tour: I have calculated the average sum, and find it 6*l.* 6*s.*

LET-

LETTER XXXVI.

I Must, in the next place, enter upon a review of perhaps the most important part of the intelligence I generally received, that of the particulars of farms. There are numerous lights in which they must be viewed, and all of them so connected with utility, that I scarcely know which is most important. There has not, of late years, been any subject in political œconomy that has been more debated, than the size of farms that is most advantageous: the importance of having the kingdom divided into such as are most favourable to product, and industrious population, is apparent and undisputed; but the most advantageous proportions are unknown. Upon this very important subject, the publick has hitherto received no other information or satisfaction, that what is to be had from reasoning; we have had volumes of reasons, arguments, and opinions, upon this point, but scarce any facts; it is, therefore, with peculiar satisfaction that I shall endeavour to treat the subject in a new way, by presenting facts alone. In every branch of agriculture

ture and rural œconomy the world has been deluged with reasoning; it is high time that *fact* and *experiment* should dissipate the contradictions and obscurities of *opinion*. I have not the least prejudice in favour of, or against, large, middling, or small farms; and I am now totally ignorant how the event of the following calculations will turn out; but on which ever side of the question, I shall adhere to the result, and found my future opinion on it, till more extensive minutes prove any thing to the contrary.

In the first place I shall form a table of all the farms of which I gained particulars, with the addition of one or two circumstances collected from the general minutes. In the particulars of farms, the number of acres, of each sort of grain, &c. is not always specified; but as that is a point of much consequence, I shall calculate them from the courses of crops in the respective neighbourhoods, which will give the totals pretty accurately, as those I minuted were every where the most common in use; and where several courses are registered, I shall extract one that seems most the average of the rest; by this means we shall come very near the truth. It was common, in my enquiries after farms, in asking the acres of each grain,

grain, for the farmers to reply, *You may see that by the crops. I told you before — for our courses are regular.* I shall also add the average product of grain and pulse to each set of farms. This first general view will give us the grand average of every article throughout the whole journey a point of no slight consequence.

See the annexed table.

These particulars of two hundred and fifty farms, of all sorts and sizes, on all kinds of soil, and under every variation of culture and stock, spread over a line of country of more than five and twenty hundred miles, undoubtedly presents an epitome of all that part of the kingdom through which the tour was made, and will, I apprehend, be thought to contain very numerous *data* to calculate on, relative, if not to the kingdom at large, at least to that very considerable part of it here travelled over: the subject of every one of these columns is of too much importance to be neglected: the first light into which I shall throw them will be the drawing up the general averages of the whole table; these will exhibit those proportions which are so particularly valuable in all enquiries into the state of rural as well as political œconomy.

Total acres <i>per</i> farm,	- - -	287
Ditto of grafs,	- - -	148
Ditto of arable,	- - -	149
Rent, 142 <i>l.</i> 12 <i>s.</i> 6 <i>d.</i>		
Draught cattle,	- - -	10½
Cows,	- - -	12
Fatting beasts,	- - -	9
Young cattle,	- - -	20
Sheep*,	- - -	260
Men servants,	- - -	2
Maid ditto,	- - -	1½
Boy ditto,	- - -	1
Labourers,	- - -	3
Acres of wheat †,	- - -	27½
Ditto of barley,	- - -	26
Ditto of oats,	- - -	20½
Ditto of pease,	- - -	11½
Ditto of beans,	- - -	6
Ditto of turneps,	- - -	14
Ditto of clover,	- - -	6½

* Including right of commonage in some farms.

† A difficulty here occurred to me: Upon reviewing the courses of crops throughout the tour, I found the quantity of rye and maslin extremely small; coming into too few courses to form a separate column; yet, as it is sown in several places, some part of this quantity must be rye; but, from the most attentive observation I have been able to make, I am confident the quantity of rye, compared to that of wheat, throughout this tour, is a nothing, not more than as one to ten.

This

This table, which is the average farm of above seventy thousand acres of land, cannot be far in any particular from the medium of the counties through which the tour extends, and consequently the utility of it in discovering the proportions of soil, product, population, and stock, must be far beyond whole volumes of conjectures. To throw the proportions into a yet clearer light, the following state will be of service.

Rent. About 10*s.* *per* acre.

Draught cattle. Twenty-seven acres total *per* head. Ditto of arable, thirteen acres and half.

Cows. Twenty-four acres *per* head. Ditto grass twelve.

Fatting beasts. Thirty-two acres *per* head. Of grass sixteen.

Young cattle. Fourteen acres *per* head. Of grass seven.

Sheep. Rather better than one acre *per* head.

Men servants. One hundred forty-three acres *per* head.

Maid ditto. One hundred ninety-one *per* head.

Boys. Two hundred eighty-seven ditto.

Labourers. Ninety-six ditto.

Ditto

Ditto and servants. Fifty-seven ditto.

The wheat the tenth part of the farm.

Ditto the fifth of the arable.

The barley the twelfth of the farm; and the sixth of the arable.

The oats the fourteenth of the farm; and the seventh of the arable.

The pease the twenty-fifth of the farm; and the twelfth and half of the arable.

The beans the forty-eighth of the farm; and the twenty-fourth of the arable.

The turneps the twentieth of the farm; and the tenth of the arable.

The clover the forty-fourth of the farm; and the twenty-second of the arable.

These circumstances are much worthy of observation. The table includes every sort of soil, culture, and stock; counties that are divided into very large farms, and many others that have scarcely a large one in them; there are consequently few particulars that have not some effect in the foundation of the averages.

We

We find, *first*, That the greatest part of the kingdom is divided into moderate farms; for those under three hundred acres (including the most waste and barren soils) cannot be thought large in any county: The tour extends twice through the large one of *Northumberland*, which contains few that are small, and some so great as 6000 acres, several of which class are included in the preceding tables; the generality must therefore be very moderate in size, for the medium of the whole to be no greater than two hundred eighty-seven acres. This is a fact which contradicts, very strongly, the popular ideas current at present, of the whole kingdom being *monopolized* by *great farmers*. Such notions have, indeed, been so very common, and have given rise to such numbers of publications, complaining of this imaginary evil, as one of the most dreadful that could befall the kingdom, that I was prepossessed with the expectation of the average of farms being much larger. Whether large or small farms are most advantageous to the kingdom, is another question, that concerns not the present part of our enquiry. Granting, therefore, that large farms are ever so pernicious, yet the assertions of their being predominant at present

present in *England*, is, I think, plainly a mistake.

Large stocks in every business are attended with considerable profit: It is so in commerce, in manufactures, in shop-keeping, and in every other branch of traffic; it must consequently be the same in agriculture: To suppose that a man is to employ fifteen or twenty thousand pounds in farming, and not make considerable profits, is an absurdity: Now the existence of a few great farms, that are cultivated at much expence, and of course with a considerable profit, give rise to a series of notions of monopolizing farms, and of the immense profits of husbandry, till the subject becomes a standing-dish at every table; though perhaps there are not ten great farms in half a county: One or two probably are formed by an union of several small ones; only one farmer lives where five or six lived before; *Ergo*, says common talk, nine tenths of the kingdom is monopolized and depopulated; It is surprizing how few instances, in any thing out of the common road, are sufficient to raise a clamour of lies and absurdity among the vulgar, until they are listened to even by the legislature itself. In the counties of *Worcester* and *Northumberland*, for instance,

stance, in both which there are very great farms, and where conversation turns much on them, if an account was taken of every one, I have little doubt but the average would turn out, in the former, less than the general medium of this tour, and not much above it in the latter. There is no county in *England*, where large farms, and rich farmers, are more the subject of common conversation, than *Norfolk*; and yet I dare venture to answer for it, that the average of that county, no more than of this tour, is so high as three hundred acres. We, in no large tract of country, hear of very large farms, without a greater number of small ones: Certain districts in *Northumberland* are exceptions, but they no where continue for above ten or a dozen miles together. For these, and an hundred other reasons, I apprehend the instances quoted every where in conversation, of a country being converted into enormous farms, under the inflammatory epithet of *monopoly*, if true, bear no proportion to the general state of such country; and respecting the kingdom at large, from the minutes of this extensive journey, we have the greatest reason to believe, that farms are yet moderate upon an average; and in all matters of this sort, particular instances are

are of no account; the medium of the kingdom is the only point to be considered

But there is another circumstance which makes this medium of two hundred eighty-seven acres, yet more moderate, and it is that of including some extreme great farms in the North, on soils that could not possibly be divided into small ones: Take a view of the *Northumberland* moors, that are occupied by thousands of acres under a tenure; such farms exist merely from being large; were they not immense, they would not exist at all: Many of them contain vast tracks of country, as wild as it was centuries ago; but being occupied by very rich farmers, much of it receives some cultivation, which, bad as it is, is, as far as it extends, beneficial to the kingdom. Would it be better in small farms? Would it be cultivated at all? View, on every hand, considerable tracks that are *unoccupied*, and to be hired, at any time, for twelve-pence an acre. If small farms, in such countries, are beneficial, surely we should see some of them: the cottages that are spread over it, would, by degrees, grow into farms, while surrounded by land they may have for asking. Great farms, in such countries, might, with

with no impropriety, be thrown out of the question; and then the average of the remainder would be much less than two hundred and eighty seven acres.

The proportion of the grass and arable surprizes me not a little. I had no notion of so just a proportion existing in general: The common mischief, in (as I apprehended) nine farms out of ten, is the having too little grass land; by which means the arable is too frequently run out of heart for want of the manure which arises from great stocks of cattle. Half and half is a good proportion; it would be much for the benefit of agriculture if such an one was preserved in all the moist and heavy parts of the kingdom, instead of poaching with the plough over fields that do not get a manuring once in seven years.

The article of rent is a strong confirmation of the size of farms not being, upon the whole, of an overgrown size. An hundred and forty two pounds a year is, in no country which I am acquainted with, reckoned even a large farm; or too large even by those gentlemen that argue very much against large farms in general.

The rent *per* acre is nearly ten shillings. The small variation between that sum, and the general average of the tour,
drawn

drawn from quite another calculation, is a strong confirmation of both; since it would have been no material contradiction had they varied considerably.

The article draught cattle is quite consistent with the former result of the enquiry into tillage; and a strong confirmation of the remark I before made, that the number of draught cattle (particularly horses, as they are more than ten to one) in this kingdom, is vastly greater than it ought. The proportion of ten horses and a half to two hundred eighty seven acres, an hundred and forty nine of them arable, is vastly beyond the necessary strength. Supposing the farm cultivated in two circumstances, as it ought, *viz.* the fallows broke up before winter, and a sufficient portion of it every year under clover, I will venture to aver, that eight horses, or oxen, are teams enough for two hundred acres of arable land, or six to an hundred and fifty: But this depends on never ploughing with more than two of either. However, according to the common practice of several whole counties, seven and a half to such a farm would be an ample allowance. It is much to be regretted, that such a waste of strength should be suffered: It is a regular and national loss.

The

The stock of cows, beasts, and sheep bear a tolerable proportion to the grass land, considering that the whole farm is at ten shillings an acre; as some of the sheep are kept on commons, the cattle would be more numerous on an hundred and forty acres of good grass; but ten shillings *per* acre is much under the mean value of good grass.

The article of labour is much under what it ought to be; five men and one boy are too few for cultivating such a farm in a complete manner, or, indeed, upon the improved system of several counties. And this disproportion will be found the greater, when it is considered, that in the greatest part of the kingdom a plough never moves without two men; consequently a very considerable portion of this amount of labour is uselessly applied. The husbandry that is conducted with this strength cannot be good; and it is much to be regretted, that the average of the kingdom should lie under this deficiency of labour: It was very natural to conclude, that this would be the result of that part of the table, from common observation, in most counties. Very few farmers employ the hands they ought:

The assignment of fifty-seven acres *per* man, half grass and half arable, is palpably too great to be consistent with good husbandry; twenty acres *per* head, half, or two thirds arable, would be much nearer the standard of excellent management.

Candour requires me to remark, that the proportions of the crops are not drawn from equal authority with the other articles. In many instances I was not informed of the actual number of acres of each grain; in which case I supply the break by the mean proportions of the courses of crops in the neighbourhood; a method that, probably, is not accurate, but which is undoubtedly more to be depended on, than any general calculations or suppositions; for although it is not exact, yet the deviations from fact cannot well be great, or numerous; and consequently the proportions of this farm not far from the average of the tour.

The fifth part of the arable land being sown with wheat, is, upon the whole, a good proportion, and does not look as if an eagerness for gain, induced the farmers to sow too much of it.

The

The proportion of the oats being so near that of the barley, is a very melancholy consideration: It is a grain that much exhausts the soil, and at the same time that the use of it contributes so little to the public good: Barley exported, or malted, is infinitely more valuable to the public, than oats, feeding horses for that work, which oxen would perform as well.

The worst proportion in this table is the amount of the exhausting crops, *viz.* wheat, barley, and oats, so much exceeding the ameliorating ones of pease, beans, turneps, and clover: The former amount to seventy-four acres, or half the arable; beans, as nine tenths of the country never hoe them, are the same, which makes the exhausting crops eighty acres, whereas the ameliorating ones are only thirty-two. This is very pernicious; and cannot fail of causing a regular deduction from the products, which the soil would otherwise yield. The quantity of wheat and barley raised is much the less on this account, for *the fewer the acres*, with good management, one may almost say, *the greater the crop*.

Having thus drawn the total of all these articles into one view, we must, in the

next place form a comparison of the different sized farms, that we may be able to determine, as far as these minutes extend, which are the most advantageous, both to individuals and to the state. And this comparison I shall make distinctly under the several heads of *Live stock*, *Population*, and *Product*. In the scale of this comparison, I think it will be stating it with more precision to be guided by the acres rather than rent; the latter is a capricious circumstance, varying according to favour and other extraneous circumstances; whereas the former always is decisive of the size of the farm.

Respecting the article *Product*, it is necessary to add, that the fair comparison of that lies with the general run of farms, in each neighbourhood; as the average products in bushels are not of each respective farm, but, like the general size of farms, that of the neighbourhood.

LIVE STOCK.

Farms to 50 acres.

Place No.	Soil.	Acres.	Arable.	Grass.	Rent.	Draught.	Cows.	Pigs.	Young.	Sheep.
	1.	2.								
19		12 6	50	43	7	62	5	1		60
48		8	50	35	15	22	5	2		
64		5	50			12	3	3	2	300
65		5	35			9	3	2		200
85	I	10	40	40	49		6		2	100
86	I	10	20	20	35		3			200
106	I		35	35	42	2	3		6	100
150		15	50	20	30	35	3	1	2	20
163		10 6	50	50	40	1	8	6	10	80
166	I	I	35	30	5	35	4		6	
167	I	I	46	38	8	40	4	6	1	4
168		17	45	13	32	50	4	4	3	6
174		17 6	40	12	28	50	3	4		6
181	I		40	10	30	40	2	7		
188		16	50	5	45	45	2	12		
189		16	38		38	30	1	9		
192	I		50		50	40	1	10		4
198		16	50	35	15	45	4	4		3
204		15	30	10	20	25	3	4		
207		17 6	40		40	40	1	12		
208		17 6	35		35	30	1	11		
213	I		45	35	10	25	3	6		5
216	I	10	40	30	10	53	4	5		8
236		17	40	30	10	36	5	4		2
244	I		40	35	5	45		5		20
Av.		17	41	25	27	37	3	5	$\frac{1}{2}$	2

A a 3

I do

I do not give the average of sheep, as the common right would prevent any useful comparison; but I give the number in the column, for the sake of a general view.

Farms of from 50 to 100 acres.

Place No.	Soil.			Acres.	Arable.	Grass.	Rent.	Draught.	Cows.	Fat.	Young.	Sheep.
	l.	s.	d.									
6		9	9	100			60	8	12			200
15		10		81	61	20	36	9	6			72
16		15		55	43	12	40	6	7			
18		17		70	45	25	50	4	6	8		
19		12	6	50	43	7	62	5	1			
21		12	6	80	40	40	30	2	10			
24		9	3	70	70		40	14	3			150
28		10		90	40	50	60	6	6			10
35		17	6	90	30	60	80	6	6	6		40
40		10		70	60	10	38	6	6			300
41		10		87	57	30	70	6	6			200
44		8		80	40	40	35	6	3		4	10
45		8		60	30	30	30	5	4		4	60
46		8		100	50	50	40	10	8		6	10
47		8		70	40	30	25	6	4			14
51		10		70	40	30	40	6	2			100
54		6	6	55	35	20	23	5	2			
67		13		100	40	60	50	5	9			10
69		13		100	30	70	70	3	9		4	12
70		13		95	30	65	62	2	10		3	30
71		13		100	40	60	70	3	10		4	10

Places,

Place. No.	Soil.			Acre.	Arable.	Grass.	Rent.	Draught.	Cows.	Fat.	Young.	Sheep.
	l.	s.	d.									
73		10	6	86	10	76	34	3	6		10	300
76		10		80	30	50	60	5	5		5	10
77	I	I		60	20	40	60	6	6		6	60
79	I	I		100	35	65	80	5	6	8	15	200
83		12		72	42	30	30	5	2		4	10
84	I	10		55		55	52		7	I	3	200
87	I	10		55		55	60		8			300
92		12	6	89	22	67	40	3	6		4	16
97		16	6	100	50	50	65	5	10		8	20
98		16	6	65	20	45	40	3	8		6	40
101		8		69	18	51	31	3	7		3	30
102		8		56	20	36	26	3	5		6	20
103	I			100	4	96	80	6	6	16	20	300
104	I			75	5	70	76	3	5	10	13	200
109		16		100	30	70	75	7	6	4	18	60
110		16		57	16	41	40	5	3	2	8	30
111		16		80	20	60	50	4	4		10	50
116	I			100	60	40	90	6	4		8	20
139		10	6	100	50	50	30	6	4		8	50
142		15		90	40	50	50	6	5		6	
145		12	6	80	20	60	35	3	5		2	20
146		15		100	60	40	70	4	6	1	10	80
149		15		80	40	40	70		5	1	13	30
152		8	9	100	40	60	75	6	10	4	24	100
154		8	9	80	20	60	55	3	4		10	
155	I	5		100	90	10	50	8	10	4	20	400
158	I	5		70	20	50	50	4	8	2		200
160		10	6	100	15	85	100	2	20	15	15	200

A a 4

Places.

Place. No.	Soil. l. s. d.	Acres.	Arable.	Grass.	Rent.	Draught.	Cows.	Fat.	Young.	Sheep.
162	10 6	70	5	65	63	2	10	2	8	200
164	1 1	55	50	5	56	4	10	2	4	
165	1 1	70	50	20	65	5	12	2	6	30
169	17	62	16	46	63	5	10	3	8	30
170	17	70	30	40	75	8	12	5	10	40
175	17 6	65	20	45	58	4	6		6	20
176	17 6	90	30	60	85	6	10		13	20
178	15	60	20	40	120	3	15		10	
179	15	60	20	40	50	3	6	3	10	20
184	1	87	47	40	72	4	6	3	10	30
195	16	90	30	60	60	4	6		8	
201	15	100	60	40	70	6	10	2		20
202	15	85	50	35	70	4	6	5		
203	15	60	40	20	40	4	5			10
205	17 6	86	26	60	75	3	15			
206	17 6	70	20	50	55	3	12			
209	1	100	90	10	120	7	6		5	150
212	1	80	68	12	50	4	6		4	10
214	1 10	60	40	20	100	6	15		5	
217	1 10	55	40	15	69	5	8		10	
219	15	100	90	60	100	9	14		10	50
220	15	90	80	10	70	5	5		10	
223	1 2 6	70	50	20	70	7				180
224	1 2 6	90	90		50	8	10		2	100
233	1 5 6	60	55	5	46	6	5			
234	17	60	40	20	50	8	6		5	15

Places.

Place No.	Soil.			Acres.	Arable.	Grafs.	Rent.	Draught.	Cows.	Fat.	Young.	Sheep.
	l.	s.	d.									
235		17		100	70	30	84	8	10	2	5	30
240	I			100	80	20	95	6	4		3	
241	I			100	100		90	8	6			100
243	I			80	70	10	80		5			30
247		12		70	30	40	50	4	2			
248		12		80	70	10	60	6	8			100
250		12		100	60	40	60	8	4			
Av.		15	7	79	41	38	59	5	7	1 ¹ / ₃	5	

Farms from 100 to 200 acres.

1		12		150	120	30	120	6	5			100
5		13	9	150	120	30	90	9	10			100
7	I			140	20	120	140	4	30			150
8	I			200			160	3	30			80
9	I			200			160	2	10			80
10	I			200	60	140	180	7	2	30		400
13		5		180			50	10	30			200
14		12	6	200	150	50	100	6	10			160
22		12	6	140			70	8	16			
23		9	3	200	70	130	120	11	4			70
25		10		155	77	77	100	8	12			30
27		10		107	30	77	75	5	15			
29		10		115	75	40	84	6	6			10
30		10		110	60	50	80	6	6			20
31		10		160	80	80	110	8	12			50
32		10		130	70	60	82	10	16			10
33		10		122	80	42	80	8	8			10
36		17	6	150	60	90	120	14	10	12	16	40

Places.

Place No.	Soil.			Acre.	Arable.	Grass.	Rent.	Draught.	Cows.	Fat.	Young.	Sheep.
	l.	s.	d.									
38		10		120	100	20	76	6	7			200
39		10		170	130	40	56	10	12			
42		8		180	60	120	80	7	6	2	6	
43		8		145	70	75	60	9	8	2	6	18
50		10		200	120	80	90	12	3		8	400
52		6	6	200	70	130	100	8	15	8	10	80
55		12		150	30	120	95	9	19	4	20	140
56		12		160	30	130	95	5	24	10	10	20
57		12		140	40	100	75	3	20		9	25
60		12		200	40	160	100	8	20	6	20	300
62		5	10	110	30	80	35	7	11	3	3	25
63		5	10	200	90	110	82	8	22	8	14	40
68		13		180	60	120	117	7	13		4	10
72		10	6	162	12	150	60	3	10		6	20
74		10		190	80	110	100	10	10	8	18	140
75		10		180	60	120	85	9	11		18	80
81		12		150	130	20	80	8	6		14	26
91		12	6	130	40	90	55	4	10		8	20
94		12	6	190	28	162	100	3	10	8	24	150
100		8		178	50	128	84	4	12	4	6	50
105	I			160	55	105	135	8	15	6	20	400
112		16		150	50	100	100	12	12	8	30	100
115	I			180	80	100	140	8	7	7	20	30
117		12		130	80	50	60	7	4	4	12	20
119		12		200	100	100	90	8	10	5	10	30
122		15		200	200		100	8	16		16	60
137		10	6	200	80	120	70	6	10		8	200
138		10	6	130	40	90	35	4	5		4	100
140		15		200	150	50	100	16	12		20	
143		12	6	130	60	70	60	6	9	3	20	100

Places.

Places. No.	Soil. l. s. d.			Acres.	Arable.	Grass.	Rent.	Draught.	Cows.	Pat.	Young.	Sheep.
144	12	6		200	80	120	80	8	10	5	22	300
147	15			140	86	54	95	7	12	2	22	30
148	15			125	55	70	70	4	0	2	26	50
157	1	5		130	50	80	95	6	1		18	200
159	10	6		200		200	140	2	10	60	20	700
161	10	6		120	20	100	75	3	13	8	10	500
171	17			200	70	130	180	12	10	8	25	50
172	17			160	60	100	140	9	15	4	18	200
173	17			110	50	60	85	8	6	2	15	26
180	15			135	70	65	95	8	20		6	40
182	1			200	100	100	300	10	26	5	20	60
183	1			110	40	70	90	4	15	2	8	20
185	16			200	30	170	150	6	50	5	6	20
186	16			150	40	110	120		35	5		
187	16			130	20	110	100	4	40			10
191	1			200	30	170	200	3	30			20
194	16			200	90	110	150	9	20	3	20	20
196	16			140	70	70	115	8	14	6	12	10
197	16			125	80	45	100	8	15			
210	1			150	120	30	110	8	12	2	4	200
211	1			135	100	35	90	6	7	1	5	130
215	1	10		200	160	40	180	10	20	6	20	20
221	1	2	6	200	200		170	12	16		5	170
225	1			200	140	60	200	12	16		20	400
239	1			200	160	40	200	10	5	5		50
242	1			160	130	30	150		10		5	80
245	12			200	140	60	36	8	6			40
249	12			200	200		130	10	5			100
Av.	14			163	78	85	106	9	13½	4	9	

Farms

Farms from 200 to 300 acres.

Place. No.	Soil. a. d.	Acres.	Arable.	Grass.	Rent.	Draught.	Cows.	Pigs.	Yokes.	Sheep.
3	5	300	280	20	70	6	6			220
4	14	300			200	9	12			60
12	17	250			100	11	20			200
20	8	283	213	70	120	21	4		12	180
26	10	240	120	120	152	16	14		2	
49	10	280	140	140	160	16	5	8	8	100
53	6	300	110	190	112	12	22	18	13	140
59	12	300	45	255	125	12	16	6	25	300
61	12	300	40	260	95	12	6	2	10	80
82	12	272	172	100	135	14	20		36	75
89	12	300	70	230	200	6	14	8	24	80
95	12	300	60	240	150	7	7	4	9	180
96	12	300	60	240	170	6	7	4	8	230
99	16	250	50	200	80	6	10	4	15	30
108	16	240	80	160	180	16	10	5	24	150
113	12	300	100	200	300	14	12	20	12	40
118	12	300	160	140	160	12	20	10	30	50
131	6	240	30	210	75	8	4	6		400
141	15	300	150	150	140	18	20		20	
153	8	240	120	120	100	8	12	8	30	200
156	5	220	120	100	80	12	22	5	30	400
200	15	250	130	120	210	16	15	40		
218	15	260	160	100	300	15	24		14	100
232	5	300	270	30	200	14	21			200
238		300	250	50	280	13	8		4	200
246	12	300	40	260	40	5	18		5	50
Av.	13	278	123	155	151	11	13	5	12	

Farms

Farms from 300 to 400 acres.

Place, No.	L.	S.	d.	Acres.	Arable.	Grass.	Rent.	Drainage.	Cows.	Pigs.	Young.	Sheep.
78	I	I		400	80	320	200	10	17	39	28	200
90		12	6	320	120	200	100	10	11		27	30
93		12	6	400	80	320	170	8	24	16	36	60
120		15		400	350	50	320	28	8		20	300
124		15		360	200	160	250	12	10	3	16	50
177		15		400	100	300	200	20	30	10	30	40
190	I			400	40	360	250	6	50		12	1000
193		16		400	150	250	300	12	36	12	30	50
228	I			310	210	100	320	17	30	10		800
Av.		16	4	365	137	128	234	13 $\frac{2}{3}$	24	10	22	

Farms from 400 to 500 acres.

37		15		500	200	300	200	22	6	50		260
58		12		450	60	390	225	14	25	12	30	250
114	I			450	200	250	420	27	30	25	30	90
136		10	6	450	250	200	180	17	15		20	1000
227	I			460	410	50	400	30	10	8		900
231	I	5	6	460	410	50	400	13	20		5	200
237	I			420	360	60	400	18	2			400
Av.		17	6	455	270	185	315	20	15 $\frac{1}{2}$	13 $\frac{1}{2}$	12	

Farms

Farms from 500 to 700 acres.

Place, No.	Soil.	Acres.	Arable.	Grafs.	Rent.	Draught.	Cows.	Fat.	Young.	Sheep.
11		660	600	60	300	20	20			650
121	15	700	400	300	300	36	10	12	30	500
129	6 6	700	500	200	160	30	6		20	500
130	6 6	700	100	600	200	20	6		12	700
199	15	700	300	400	400	22	26	30		200
226	1	570	450	120	530	40	30	10	20	1100
230	1 5 6	600	550	50	525	16	20			500
Av.	14 9	661	414	247	345	26	17	7	12	

Farms from 700 to 1000 acres.

66	8	4	1000			416	24	30	14	36	170
128	6	6	1000	500	500	320	34	5		20	1000
135	11	3	1000	400	600	500	36	8		60	800
222	1	2	850	400	450	800	30	40	40	20	1000
Av.	12		962	433	516	509	31	20 $\frac{1}{2}$	13 $\frac{1}{2}$	34	

Farms of above 1000 acres.

[illegible]

Places. No.	Soil. l. s. d.	Acres.	Arable.	Grass.	Rent.	Draught.	Cows.	Fat.	Young.	Sheep.
132	11 3	6000	2000	4000	1050	180	30		200	8000
133	11 3	5000	1500	3500	1500	140	30		150	3000
134	11 3	2000	500	1500	700	40	20		80	2000
157	8 9	2000		2000	200	5	20		40	2000
229	1 5 6	2000	2000		1450	40	20		8	700
Av.	10*8	2380	1016	1390	734	57	20	12	82	

Recapitulation.

Farms.	Rate. s. d.	Acres.	Arable.	Grass.	Rent.	Draught.	Cows.	Fat.	Young.
50 acres	17	41	25	27	37	3	5	1 1/2	2
50 — 100	15 7	79	41	38	59	5	7	1	5
100 — 200	14	163	78	85	106	9	13	4	9
200 — 300	13 6	278	123	155	151	11	13	5	12
300 — 400	16 4	365	137	128	234	13	24	10	22
400 — 500	17 6	455	270	185	315	20	15	13	12
500 — 700	14 9	661	414	247	345	26	17	7	12
700 — 1000	12	962	433	516	509	31	20	13	34
Above 1000	10 8	2380	1016	1390	734	57	20	12	82

* Numbers 132, 3, 4 at 11s. 3d. is near double the rents of the farms, but the rule must be adhered to.

Draught

DRAUGHT CATTLE.

Farms to 50 acres.	13 acres <i>per head</i> .
	8 ditto arable.
	12 <i>l.</i> rent <i>per head</i> .
50 to 100 acres.	15 acres <i>per head</i> .
	8 ditto arable.
	19 <i>l.</i> rent <i>per head</i> .
100 to 200 acres.	18 acres <i>per head</i> .
	8 ditto arable.
	11 <i>l.</i> rent <i>per head</i> .
200 to 300 acres.	25 acres <i>per head</i> .
	11 ditto arable.
	13 <i>l.</i> rent <i>per head</i> .
300 to 400 acres.	28 acres <i>per head</i> .
	10 ditto arable.
	18 <i>l.</i> rent <i>per head</i> .
400 to 500 acres.	22 acres <i>per head</i> .
	13 ditto arable.
	15 <i>l.</i> rent <i>per head</i> .
500 to 700 acres.	25 acres <i>per head</i> .
	15 ditto arable.
	13 <i>l.</i> rent <i>per head</i> .
700 to 1000 acres.	31 acres <i>per head</i> .
	14 ditto arable.
	16 <i>l.</i> rent <i>per head</i> .
Above 1000 acres.	41 acres <i>per head</i> .
	17 ditto arable.
	13 <i>l.</i> rent <i>per head</i> .

Cows.

COWS.

Farms to 50 acres.	8 acres <i>per head</i> .
	5 ditto <i>grafs</i> .
	7 <i>l.</i> rent <i>per cow</i> .
50 to 100 acres.	11 acres <i>per head</i> .
	5 ditto <i>grafs</i> .
	8 <i>l.</i> rent <i>per cow</i> .
100 to 200 acres.	12 acres <i>per head</i> .
	6 ditto <i>grafs</i> .
	8 <i>l.</i> rent <i>per cow</i> .
200 to 300 acres.	21 acres <i>per cow</i> .
	11 ditto <i>grafs</i> .
	11 <i>l.</i> rent <i>per cow</i> .
300 to 400 acres.	14 acres <i>per cow</i> .
	5 ditto <i>grafs</i> .
	9 <i>l.</i> rent <i>per cow</i> .
400 to 500 acres.	30 acres <i>per cow</i> .
	12 ditto <i>grafs</i> .
	21 <i>l.</i> rent <i>per cow</i> .
500 to 700 acres.	38 acres <i>per cow</i> .
	14 ditto <i>grafs</i> .
	20 <i>l.</i> rent.
700 to 1000 acres.	48 acres <i>per cow</i> .
	25 ditto <i>grafs</i> .
	25 <i>l.</i> rent <i>per cow</i> .
Above 1000 acres.	113 acres <i>per cow</i> .
	66 ditto <i>grafs</i> .
	34 <i>l.</i> rent <i>per cow</i> .

FATTING BEASTS.

Farms to 50 acres.	82 acres per head.
	54 ditto grafs.
	74 l. rent per head.
50 to 100 acres.	79 acres per head.
	38 ditto grafs.
	59 l. rent per head.
100 to 200 acres.	40 acres per head.
	21 ditto grafs.
	26 l. rent per head.
200 to 300 acres.	55 acres per head.
	31 ditto grafs.
	30 l. rent.
300 to 400 acres.	36 acres per head.
	12 ditto grafs.
	23 l. rent per head.
400 to 500 acres.	35 acres per head.
	14 ditto grafs.
	24 l. rent.
500 to 700 acres.	94 acres per head.
	35 ditto grafs.
	49 l. rent per head.
700 to 1000 acres.	74 acres per head.
	39 ditto grafs.
	39 l. rent per head.
Above 1000 acres.	198 acres per head.
	115 ditto grafs.
	61 l. rent per head.

YOUNG

YOUNG CATTLE.

Farms to 50 acres.	20 acres <i>per head</i> . 13 ditto <i>grafs</i> . 18 <i>l.</i> rent <i>per head</i> .
50 to 100 acres.	15 acres <i>per head</i> . 7 ditto <i>grafs</i> . 11 <i>l.</i> rent <i>per head</i> .
100 to 200 acres.	18 acres <i>per head</i> . 9 ditto <i>grafs</i> . 11 <i>l.</i> rent <i>per head</i> .
200 to 300 acres.	23 acres <i>per head</i> . 12 ditto <i>grafs</i> . 12 <i>l.</i> rent ditto.
300 to 400 acres.	16 acres <i>per head</i> . 5 ditto <i>grafs</i> . 10 <i>l.</i> rent <i>per head</i> .
400 to 500 acres.	37 acres <i>per head</i> . 15 ditto <i>grafs</i> . 26 <i>l.</i> rent <i>per head</i> .
500 to 700 acres.	55 acres <i>per head</i> . 20 ditto <i>grafs</i> . 28 <i>l.</i> rent <i>per head</i> .
700 to 1000 acres.	28 acres <i>per head</i> . 15 ditto <i>grafs</i> . 14 <i>l.</i> rent <i>per head</i> .
Above 1000 acres.	29 acres <i>per head</i> . 17 ditto <i>grafs</i> . 9 <i>l.</i> rent <i>per head</i> .

These proportions will appear clearer in the following table.

DRAUGHT CATTLE.

<i>Farms.</i>	<i>Acres per head.</i>	<i>Ditto arable.</i>	<i>Rent per head.</i>
To 50 acres	13	8	12
50 to 100	15	8	19
100 to 200	18	8	11
200 to 300	25	11	13
300 to 400	28	10	18
400 to 500	22	13	15
500 to 700	25	15	13
700 to 1000	31	14	16
Above 1000	41	17	13

It should be observed, that oxen bear no sort of proportion to horses, in number; so few are used, that one might almost call these numbers, horses; but where oxen are in use, it is totally in large and middling farms: *Northumberland* particularly, where most of the very large farms in this list are situated.

Upon these proportions it may be remarked, that the great excess of draught cattle, which was proved in another place to be so extremely detrimental to the kingdom, without benefitting the culture of it, here appears to be owing almost entirely to the smaller farms. In those of two hundred

dred acres and under, a horse is kept to every eight acres of arable land, which is an enormous number, very near, if not quite, three times as much as necessary. From two-hundred to five-hundred the extra number is considerable, and in the very large farms more than requisite: The proportions will be seen by dividing thus.

<i>Farms.</i>	<i>Acres per head.</i>	<i>Ditto arable.</i>	<i>Rent per head.</i>
To 200 acres	15	8	14
200 to 500	25	11	15
Above 500	32	15	14

The difference is very great between the first and the last; within a trifle DOUBLE the number of horses on small, than on large farms.

C O W S.

<i>Farms.</i>	<i>Acres per head.</i>	<i>Grass ditto.</i>	<i>Rent ditto.</i>
To 50 acres	8	5	7
50 to 100	11	5	8
100 to 200	12	6	8
200 to 300	21	11	11
300 to 400	14	5	9
400 to 500	30	12	21
500 to 700	38	14	20
700 to 1000	48	25	25
Above 1000	113	66	34

B b 3

It

It was certainly to have been supposed, that large farms do not keep so many cows as small ones; for it would be almost impossible were the soil ever so favourable: But the large farms in this list, only one or two excepted, are on poor soils, totally improper for feeding cows, and we find them accordingly applied chiefly to feeding sheep and young cattle. Cows are particularly adapted to small farms, and we find by this table, that in general, the smaller the farms the more the cows; this is a favourable circumstance to them; There is one strong exception, however; but it is requisite to reduce the table into three averages, as follows:

<i>Farms.</i>	<i>Acres per head.</i>	<i>Grass ditto.</i>	<i>Rent ditto.</i>
To 200 acres	10	5	7
200 to 500	21	9	13
Above 500	66	35	26

The difference between the first and second articles is not so great as I expected, especially as the latter includes so large farms as five-hundred acres: However, the advantage is certainly, upon the whole, on the side of small farms; from the smallest to a hundred acres, and also from three-hundred to four-hundred, are all equal.

FATTING CATTLE.

<i>Farms.</i>	<i>Acres per head.</i>	<i>Grass ditto.</i>	<i>Rent.</i>
To 50 acres	82	54	74
50 to 100	79	38	59
100 to 200	40	21	26
200 to 300	55	31	30
300 to 400	36	12	23
400 to 500	35	14	24
500 to 700	94	35	49
700 to 1000	74	39	39
Above 1000	198	115	61

This table is clearly decisive in favour of the middling farms, large and small are almost equally inferior; which will appear the plainer from the following division :

To 300 acres	64	36	47
300 to 500	35	13	23
Above 500	122	63	49

These proportions are not, I apprehend, difficult to account for: The farms in the last division include great numbers that maintain little stock, but vast flocks of sheep, from the poverty of the soil: And the first division includes all the little farms that are either occupied by farmers, not rich enough for grazing, or that are applied chiefly to feeding cows. The

difference between thirteen and thirty-six acres of grass *per head*, between the first and second divisions is very great; and will appear yet more considerable, when we reflect, that the richness of soil adapted to grazing lies in favour of the smaller farms.

Y O U N G C A T T L E .

<i>Farms.</i>	<i>Acres per head.</i>	<i>Grass ditto.</i>	<i>Rent ditto.</i>
To 50 acres	20	13	18
50 to 100	15	7	11
100 to 200	18	9	11
200 to 300	23	12	12
300 to 400	16	5	10
400 to 500	37	15	26
500 to 700	55	20	18
700 to 1000	28	15	14
Above 1000	29	17	9

There are so many variations in this table that contradict any general deductions, that I know not how absolutely to conclude any thing from it: The advantage lies alternately on the side of both large and small farms; but in particular instances those from three hundred to four hundred acres are the first in advantage: Next, those from fifty to an hundred; then, from two hundred to three hundred, and under fifty:

fifty: But if a division was made in the list, I should sketch it as under.

<i>Farms.</i>	<i>Acres per head.</i>	<i>Ditto grafs.</i>	<i>Ditto rent.</i>
To 400 acres	18	9	12
Above 400	37	16	16

In this comparison the advantage lies pretty much with the smaller farms, that is, the middling sized ones; and this is the only parallel I can draw between them.

But there are so many variations in these several comparisons, that the most satisfactory will be to give the three sorts of profitable cattle in one total; which will, at once, shew us the sized farms that maintains most.

<i>Farms.</i>	<i>Acres grafs.</i>	<i>Rent.</i>	<i>Cat- tle.</i>	<i>Acres per hd.</i>	<i>Rent per hd.</i>
To 50 acres	27	37	7½	3½	5l.
50 to 100	38	59	13	3	4
100 to 200	85	106	26	3	4
200 to 300	155	151	30	5	5
300 to 400	128	234	56	2	4
400 to 500	185	315	40	4	7
500 to 700	247	345	36	6	9
700 to 1000	516	509	67	7	7
Above 1000	1390	734	109	12	6

I shall

I shall probably be allowed to think, that this table is very decisive in discovering which classes of farms are most beneficial in maintaining large stocks of these kinds of cattle.

In the first rank stand those from three hundred to four hundred, which have one head of cattle to every two acres of grass; next come those from fifty to two hundred; then such as are under fifty; and next from four hundred to five hundred; the large farms are not equally beneficial in acres, but nearly so in rent, that is, from five hundred acres upwards.

This somewhat surprizes me, for altho' I am very clear in the great farms (which are mostly situated on poor soils) being infinitely superior to small ones in their stocks of sheep, yet I fully expected, that the middling sized ones would greatly exceed them in these kinds of cattle, which are so very seldom kept in large quantities on poor soils.

This table may be further divided in the following manner.

To 500 acres	{ 3½ acres grass }	{ 4 l. 15 s. rent }
	{ per head, }	{ per head. }
Above 500 — 8		7

Here

Here is a superiority, but yet it is less than might reasonably have been expected. This whole comparison of cattle must be reduced to single figures, or a decisive idea cannot be gained; both *draught* and *profitable* cattle must be included in one account, and reduced to single sums, or the comparison will not be complete: For this purpose, the proportion between them must be calculated, that is, between a horse and one of these heads of cattle; the average of cows, fatting beasts, and young cattle: I think it cannot be estimated at less than one to two: Considering how many young cattle come into the account, and the largeness, variety, and nature of draught beasts food, particularly horses, (the most numerous kind) I should not have exaggerated, perhaps, had I named one — to two and an half; however, to obviate objections, I shall suppose but one to two; that is, one horse's food, the year through, equals that of two of the average of cows, fat, and young cattle; and then we must calculate the *neat* number of profitable cattle kept by each farm; or the remainder, after deducting that of draught cattle. I shall take the total of acres, as both grass and arable are concerned: And as proportions *per acre* are not so clear as whole numbers,

bers, it will add to perspicuity to calculate the number of cattle *per hundred acres*.

<i>Farms.</i>	<i>Cattle per 100 acres.</i>	<i>Cattle per 100l. Rent.</i>
To 50 acres	$3 \frac{3}{4}$	$4 \frac{4}{37}$
50 to 100	$3 \frac{43}{79}$	$5 \frac{5}{59}$
100 to 200	$4 \frac{148}{163}$	$7 \frac{58}{106}$
200 to 300	$2 \frac{244}{278}$	$5 \frac{45}{151}$
300 to 400	$9 \frac{80}{365}$	$12 \frac{192}{234}$
400 to 500	0	0
500 to 700	0	0
700 to 1000	$\frac{1}{2}$	1
Above 1000	0	0

A division of this table (leaving out the fractions) may be made thus:

To 100 acres	3	$4 \frac{1}{2}$
100 to 400	$7 \frac{1}{2}$	8
Above 400	0	0

Or

Or thus,

To 200 acres	$3\frac{1}{2}$	$5\frac{1}{2}$
200 to 400	$5\frac{1}{2}$	$8\frac{1}{2}$
Above 400	0	0

As far as the variety extends, which is included in this tour, these tables will, I flatter myself, appear very conclusive; they prove clearly that farms of more than four hundred acres, of the nature of those which come into this account, are highly disadvantageous in the article of profitable cattle (draught cattle deducted) exclusive of sheep. Also, that farms to two hundred acres are not near so advantageous as those from two hundred to four hundred; that others to only an hundred, are yet less beneficial; and the degrees of superiority are considerable. If the average of averages be not taken as a guide, but the table itself is recurred to, the farms from three hundred to four hundred acres are more than *doubly* beneficial to any of the others; and three times over more so, than those to an hundred acres. All which proportions are extremely decisive.

Something, however, must be remarked on the great inferiority of the large farms. I should observe, that the county
of

of *Northumberland* was the most pregnant of such of any other, and both in that county, and in many others, they are situated on extreme poor soils, which answer much better to feed sheep than other cattle. Now the average of sheep cannot be taken, as the right of commonage would totally destroy all conclusions; it would not be the size of farms that determined the point, but the commons. It is every where a well known fact, that small farms, under an hundred acres for instance, maintain scarce any; unless with a common right.

It is for this reason that a *general* idea in disfavour of large farms, with respect to this article of cattle, should not be formed, without reflecting, that sheep are their peculiar stock; and a track of land so applied, equally promotes the public good, with the keeping any other stock.

But I venture this observation in general, and not particularly respecting the farms in *Northumberland**, &c. The ge-

* Of thirty farms of above four hundred acres, near half are in *Northumberland*, viz. fourteen; and two on moors in *Craven* and *Westmoreland*.

neral management is there so execrable, in many particulars, that I should not be greatly surprized if their farms were found inferior, under the allowance of every advantage whatever. But even to this general want of merit, an advantage is opposed; that of occupying and stocking soils, which, but for the division into excessive large tenures, would not be occupied at all. In a country, where the existence of a farmer is some degree of merit, and alone depending on his being a great one, we must not too critically compare him with his smaller brethren in richer soils.

General Recapitulation.

First. The larger the farms, the fewer the draught cattle.

Second. The smaller the farms, the greater the number of cows.

Third. Middling farms, (from three to five hundred acres) have near three times more fatting cattle than smaller ones, and near five times as many as larger ones.

Fourth. That farms from three to four hundred acres keep most young

young cattle ; and in general those to four hundred acres near twice as many as those above four hundred.

Fifth. That farms from three to four hundred acres maintain more of these three sorts of cattle than any other size ; and those of five hundred acres and under, more than double the number of those above five hundred.

Sixth. That farms from two to four hundred acres are more beneficial in the neat stock of these three sorts of cattle, draught ones deducted, than smaller farms, in the proportion of five and a half to three and one third ; and more than five times superior to larger farms.

POPULATION.

Farms to 50 acres.

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers.
19	50	43	62	1	0	1	1
48	50	35	22	1	0	2	0
64	50		12	0	1	1	0
65	35		9	1	0	0	0
85	40		49	1	0	0	1
86	20		35	0	0	0	0
106	35		42	0	1	1	0
150	50	20	35	0	0	1	0
163	50		40	0	0	1	0
166	35	30	35	0	1	1	0
167	46	88	40	1	0	0	0
168	45	13	50	1	2	0	1
174	40	12	50	0	1	0	0
181	40	10	40	0	1	1	0
188	50	5	45	0	1	1	0
189	38		30	0	0	1	0
192	50		40	0	1	1	0
198	50	35	45	1	0	0	0
204	30	10	25	0	0	0	0
207	40		40	0	0	1	0
208	35		30	0	1	1	0
213	45	35	25	0	1	1	0
216	40	30	53	0	1	1	0
236	40	30	36	0	0	1	0
244	40	35	45	0	0	1	0
Aver.	41	25	37	1 to 5	2 to 5	$\frac{1}{2}$	1 to 6

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Cc

Farms

Farms from 50 to 100 acres.

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers.
6	100		60	2			2
15	81	61	36	3			2
16	55	43	40	1			1
18	70	45	50	3			1
19	50	43	62	1			1
21	80	40	30	1			1
24	70	70	40	4			2
28	90	40	60	2			1
35	90	30	80	1	1	1	
40	70	60	38	2			2
41	87	57	70	3			1
44	80	40	35	2			1
45	60	30	30	2			
46	100	50	40	2			1
47	70	40	25	2			1
51	70	40	40	1			1
54	55	35	23	1			
67	100	40	50		1	1	
69	100	30	70	1	1		
70	95	30	62	1	1		1
71	100	40	70	2	1		
73	86	10	34	1	1	1	
76	80	30	60	2			
77	60	20	60	1			1
79	10	35	80	2		1	
83	72	42	30	1	1		
84	55		52		1	1	
87	55		60		1	1	

Farms.

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers.
92	89	22	40	01	01	08	081
97	10	50	65	01	01	001	201
98	65	20	40	01	01	001	101
101	69	18	31	01	02	08	100
102	56	20	26	04	04	001	000
103	100	24	80	22	02	022	200
104	75	15	76	21	01	00	000
109	100	30	75	001	01	001	010
110	57	16	40	02	00	001	010
111	80	20	50	001	01	00	010
116	100	60	90	01	01	22	010
139	100	50	30	01	01	001	010
142	90	40	50	00	01	001	010
145	80	20	35	00	01	001	000
146	100	60	70	01	01	001	000
149	80	40	70	01	01	001	000
152	100	40	75	01	01	001	010
154	80	20	55	01	01	001	000
155	100	90	50	01	01	001	000
158	70	20	50	00	01	001	000
160	100	15	100	01	01	00	000
162	70	15	63	00	01	001	000
164	55	50	56	00	00	001	000
165	70	50	65	01	01	001	000
169	62	16	63	01	01	01	000
170	70	30	75	01	01	01	000
175	65	20	58	01	01	01	
176	90	30	85	01	01	01	
178	60	20	120	01	01		
179	60	20	50	01	01		

Presb. No.	Acres.	Arable.	Rent.	Servants.	Maid.	Boys.	Labourers.
184	87	47	72	1	1	1	1
195	90	30	60	1	1	1	1
201	100	60	70	2	2	2	2
202	85	50	70	1	1	1	1
203	60	40	40	1	1	1	1
205	86	26	75	1	2	1	1
206	70	20	55	1	1	1	1
209	100	90	120	1	2	1	1
212	80	68	50	1	1	1	1
214	60	40	100	2	1	1	1
217	55	40	69	1	1	1	1
219	100	90	100	1	2	2	2
220	90	80	70	1	1	1	1
223	70	50	70	1	1	1	4
224	90	90	50	1	1	1	2
233	60	55	46	1	1	1	1
234	60	40	50	3	1	2	2
235	100	70	84	2	1	1	2
240	100	80	95	1	1	1	2
241	100	100	90	1	1	1	3
243	80	70	80	1	1	1	2
247	70	30	50	1	1	1	1
248	80	70	60	2	1	1	1
250	100	60	60	2	1	1	5
Aver.	79	41	59	1	1 to 1 1/2	2 to 3	1 to 1 1/2

Farms

Farms from 100 to 200 acres.

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers.
1	150	120	120	4			2
5	150	120	90	4			2
7	140	20	140	2			1
8	200		160	3			2
9	200		160	2			2
10	200	60	180	2			2
13	180		50	3			2
14	200	150	100	4			2
22	140		70	3			1
23	200	70	120	2			2
25	155	77	10	3			2
27	107	30	75	2			1
29	115	75	84	3			2
30	110	60	80	3			1
31	160	80	110	3			3
32	130	70	82	2			2
33	122	80	80	3			2
36	150	60	120	2	2	2	2
38	120	100	76	2			2
39	170	130	56	3			3
42	180	60	80	2			1
43	145	70	60	3			1
50	200	120	90	3			1
52	200	70	100	3			3
55	150	30	95	3			1

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers
56	160	30	95	2			
57	140	40	75	2			
60	200	40	100	2			
62	140	30	35	2			
63	200	90	82	2			
68	180	60	117	2			
72	162	12	60	2			
74	190	80	100	3			
75	180	60	85	2			
81	150	130	80	1			
91	130	40	55	1			
94	190	28	100	1			
100	178	50	84	1			
105	160	55	135	2			
112	150	50	100	2			
115	180	80	140	1			
117	130	80	60	3			
119	200	100	90	1			
122	200	200	100	1			
137	200	80	70	1			
138	130	40	35				
140	200	150	100	1			
143	130	60	60	1			
144	200	80	80	2			
147	140	86	95	1			
148	125	55	70	1			
157	130	50	95	1			
159	200		140	2			
161	120	20	75	1			

Farms.

Farms. No.	Aeres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers.
171	200	70	180	2	2	2	2
172	160	60	140	1	2	3	2
173	110	50	85	1	1	2	1
180	135	70	95	2	2	2	2
182	200	100	300	3	2	2	2
183	110	40	90	1	1	1	1
185	200	30	150	3	3	2	
186	150	40	120	1	2	2	
187	130	20	100	1	3	2	
191	200	30	200	2	3	2	2
194	200	90	150	2	2	1	3
196	140	70	115	2	1	1	2
197	125	80	100	2	2	1	3
210	150	120	110	2	2	1	3
211	135	100	90	1		2	4
215	200	160	180	3	3	2	4
221	200	200	170	1	2	2	8
225	200	140	200	3	2	2	
239	200	160	200	1	1	2	6
242	160	130	150	2	2	2	5
245	200	146	36	2	2	1	1
249	200	200	130	4	1	3	6
Av.	163	78	106	1 $\frac{1}{4}$	$\frac{3}{2}$	$\frac{2}{3}$	1

Farms from 200 to 300.

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maid.	Boys.	Labourers.
3	300	280	70	5			4
4	300		200	9			3
12	250		100	4			2
20	283	213	120	7			2
26	240	120	152	6			3
49	280	140	160	4			2
53	300	110	112	4			3
59	300	45	125	2			1
61	300	40	95	2			1
82	272	172	135	3	2	2	3
89	300	70	200	3	2	1	2
95	300	60	150	2	1	3	2
96	300	60	170	2			6
99	250	50	80	2	1	1	2
108	240	80	180	2	2	2	3
113	300	100	300	1	3	3	8
118	300	160	160		2	2	2
131	240	30	75	1	2		3
141	300	150	140	2	2	2	3
153	240	120	100	1	2	1	2
156	220	120	80	1	2	2	2
200	250	130	210	2		1	3
218	260	160	300	4	2	3	3
232	300	270	200	4	2		10
238	300	250	280	2	2		6
246	300	40	40	1	2	1	1
Av.	278	123	151	3	1	1	3

Farms

Farms from 300 to 400 acres.

Farms. No.	Acres.	Arable.	Rent.	Servants,	Maids,	Boys.	Labourers,
78	400	80	200	3	3	1	2
90	320	120	100	2	2	1	3
93	400	80	170	2	3	2	1
120	400	350	320	2	2	4	6
124	360	200	250	1	2	2	3
177	400	100	200	4	2	2	2
190	400	40	250	2	4	2	6
193	400	150	300	3	2	1	6
228	310	210	320	3	3	2	5
Av.	365	137	234	2½	2½	2	3½

Farms from 400 to 500 acres.

37	500	200	200	5			6
58	450	60	225	3			1
114	450	200	420	2		3	10
136	450	250	180	1	4	3	2
227	460	410	400	3	3	3	10
231	460	410	400	4	3	2	6
237	420	360	400	4	1	3	8
Av.	455	270	315	3	1½	2	6

Farms

Farms from 500 to 700 acres.

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers.
11	660	600	300	8			10
121	700	400	300	3	3	2	10
129	700	500	160	3	2	1	10
130	700	100	200	1	2		6
199	700	300	400	4	4	2	10
226	570	450	530	5	4	3	11
230	600	550	525	4	3	3	7
Av.	661	414	345	4	2 $\frac{1}{2}$	1 $\frac{1}{2}$	9

Farms from 700 to 1000 acres.

66	1000		416	7			22
128	1000	500	320	2	2		8
135	1000	400	500	3	2	3	16
222	850	400	800	8	5	4	10
Av.	962	433	509	5	2	1 $\frac{1}{2}$	14

Farms of above 1000 acres.

2	1200	1000	700	8			25
*88	2080		60				
107	1080	430	800	6		6	21
123	1100	700	700	3	5	4	16
125	2500	1250	650	1	2		35
126	2500	1000	700	2	2		20
127	1100	800	300	4	2	2	16
132	6000	2000	1050	12	6	6	80

Farms.

Farms. No.	Acres.	Arable.	Rent.	Servants.	Maids.	Boys.	Labourers,
133	5000	1500	1500	3	4	3	50
134	2000	500	700	2	2	2	25
151	2000		200	1	2	1	4
229	2000	2000	1450	17	5	5	20
Av.*	2407	1016	739	5 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	28 $\frac{1}{2}$

Recapitulation.

Farms.	Acres.	Arable.	Rent.	Serv.	Maids.	Boys.	Lab.
To 50	41	25	37	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{1}{6}$
50 — 100	79	41	59	1	$\frac{2}{3}$	$\frac{2}{3}$	$\frac{2}{3}$
100 — 200	163	78	106	1 $\frac{3}{4}$	$\frac{4}{3}$	$\frac{2}{3}$	1
200 — 300	278	123	151	3	1	1	3
300 — 400	365	137	234	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2	3 $\frac{1}{2}$
400 — 500	455	270	315	3	1 $\frac{1}{2}$	2	6
500 — 700	661	414	345	4	2 $\frac{1}{2}$	1 $\frac{1}{2}$	9
700 — 1000	962	433	509	5	2	1 $\frac{1}{2}$	14
Above 1000	2407	1016	739	5 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	28 $\frac{1}{2}$

* No. 88 is left out in the averages. It is Mr. Elliot's improving moor farm, the number of hands must, therefore, be very great, but, as they are not in the minutes, it ought not to be included. A farm of 2000 improving acres without labour is an absurdity in idea; besides, it is the only one above the small scales in which the hands are not minuted.

So

So complex a view as this is, however reduced from the preceding tables, will by no means convey a clear idea of the population of these farms; we must, therefore, reduce the several numbers to single ones of the number of souls to each farm, and add the farmers and the families of them and the labourers; and by calculating the proportion *per* hundred acres of arable land, the view of population will be clear and complete.

But some *data* are requisite to calculate on. I shall suppose, that only one sixth of the farmers are unmarried, and only one tenth of the labourers. These proportions are different from those I used in my Six Weeks Tour; but from further information from several quarters, I apprehend them nearer the truth; I also calculate each family at five souls upon an average.

The proportion of one sixth of the farmers being married, with families of five souls, is twenty-six souls to six farms, or four and two-sixths *per* farm, which, to avoid fractions, must be called four.

Nine tenths of the labourers being married, and forming families of five people, make forty-six souls to ten families, or four and six tenths: Now as there will be some use in calculating the *general* population of the

the kingdom dependent on agriculture, I shall in this article allow for the reduction of that of the farmers, and call the labourers on an average at five souls. This will bring the whole very near the truth, according to the given *data*; and I have great reason to believe not in the least an exaggeration of the reality. Nor will the superiority of the labourers families to the farmers be offensive to ones observation; for more farmers are found unmarried, and with small families, than labourers. It is somewhat remarkable, but the more able men are to maintain and provide for families, the less, upon an average (I apprehend) will be the number. It is a most uncommon thing to find a labourer unmarried; and their cottages are generally so full of children, that I believe I should be justified in supposing the average higher. Those which have been laid down by political arithmeticians, for the whole kingdom, will not, I should suppose, be found just to this body of men, who are certainly more assistant to population than the inhabitants of towns, manufacturers, &c. &c. and considering the nature of their life, the wonder would be if they were not. Upon the whole, we are to reckon a farmer as four souls, and a labourer as five; boys, maids, and servants, singly.

singly. — Relative to a *general* view of population, something should be deducted from these, on account of some of the boys, &c. being parts of the families of the labourers; but in a comparison of farms all must be taken into the account, the case being different.

	No. Souls per 100 acr. arab.	Ditto per 100 l. rent.
Farms to 50 acres	20 $\frac{36}{48}$	13 $\frac{19}{37}$
50 to 100	21 $\frac{39}{41}$	15 $\frac{15}{59}$
100 to 200	15 $\frac{30}{78}$	11 $\frac{34}{106}$
200 to 300	19 $\frac{63}{123}$	15 $\frac{35}{151}$
300 to 400	21 $\frac{71}{137}$	12 $\frac{192}{234}$
400 to 500	15	12 $\frac{54}{63}$
500 to 700	13 $\frac{318}{414}$	16 $\frac{186}{345}$
700 to 1000	19 $\frac{73}{433}$	16 $\frac{156}{509}$
Above 1000	14 $\frac{576}{1016}$	20 $\frac{220}{739}$

I apprehend the reader will not be displeased with this table, which I have calculated with all the accuracy I am master of, by the rules of fractions. It takes in every advantage and disadvantage of

of all sized farms; for the farmers (four souls for each) are reckoned to each quantity of land that forms a farm in the proportion of every scale. And even supposing my *data*, of four and five to one, for farmers and labourers, to be false, yet the *proportions* between the farms remain just, as they would, were any other imaginary number fixed on.

It is to be remarked here, that the rental is what we must take as our principal guide. Rich soils are, in every part of the world, better peopled than poor ones. If the number *per* hundred acres was to be our guide, the comparison would not be so exact; as the size of the farms would not determine the degree of population, but the richness of the soil. Whatever were the numbers of acres in the farms, the rich soils would universally prove the most populous. But the rental (though not always the exact value of the land) is a good index to the nature of the country, and throws all farms on a par: All the collateral advantages of the calculation are the same to both; consequently there is no objection to the use of that method which is obviously the fairest. But for the use of those who are curious enough to view these matters in every light, I shall consider the one as well as the other.

The

The order of population in these farms,
is as follows:

		Souls.
A country divided into farms of above a thousand acres each, is peopled with <i>per</i>		20 $\frac{220}{739}$
100 l. a year - - -		
From 700 to 1000 acres - - -	16	$\frac{156}{509}$
From 500 to 700 - - -	16	$\frac{180}{345}$
From 200 to 300 - - -	15	$\frac{35}{151}$
From 50 to 100 - - -	15	$\frac{15}{59}$
To 50 - - -	13	$\frac{19}{37}$
From 400 to 500 - - -	12	$\frac{54}{63}$
300 to 400 - - -	12	$\frac{192}{234}$
100 to 200 - - -	11	$\frac{34}{106}$

Rejecting fractions, the table may be
divided as follows:

500 acres and upwards - - -	17
To 300 acres - - -	13
300 to 500 - - -	12

Or

Or thus,

Above 500 acres	-	-	17
Under 500 acres *	-	-	12 $\frac{1}{2}$

This is the proportion of 8 $\frac{1}{2}$ to 6 $\frac{1}{2}$.

General average - - - 15

These methods of stating the proportions prove several points of much importance. We find that the larger the farms, a very few instances excepted, the more population is encouraged. This is so very

* The calculations per hundred acres are as follow:

From 50 to 100	21 $\frac{39}{41}$
300 to 400	21 $\frac{137}{141}$
To 50	20 $\frac{131}{141}$
From 200 to 300	19 $\frac{63}{113}$
700 to 1000	19 $\frac{71}{113}$
100 to 200	15 $\frac{30}{78}$
400 to 500	15 $\frac{576}{1000}$
Above 1000	14 $\frac{318}{414}$
From 500 to 700	13 $\frac{318}{414}$

It is from hence obvious, that no conclusions are to be drawn from this method of calculation. There are so many contradictions, that one knows not how to determine any point from it; but the small farms have, upon the whole, the advantage, which must be occasioned by richness of soil.

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contrary to the notions most common, that it may be expected something should be offered by way of accounting for it.

Great farmers are generally rich farmers; and it requires no great skill in agriculture to know, that they who have most money in their pockets, will, upon an average, cultivate the soil in the most complete manner; *good* culture, in most cases, is but another word for *much* labour. And this state of the question opens another view of this branch of rural economy, which should not be slighted: — A very considerable portion of the labour of a farm is of the *extra* kind; all included in these tables is the regular yearly allowance; but *improvements*, and most articles of vigorous culture, are done by *extra* hands; witness, marling; chalking; paring and burning; turnep hoeing; walling; &c. &c. &c. consequently the great farmers (the richest men) use a much greater proportion of this *extra* labour, than smaller (poorer) ones: And this remark is not only consistent with reason, but is verified by common observation, in every county in *England*.

In the next place I should observe, that great farmers do not keep near the proportion of servants, maids, and boys, that smaller ones do. Their superiority in population
lies

lies totally in labourers ; indeed it would be useless and impossible for them to keep the proportion of servants of small farmers ; their houses would not contain them. Now it is not the employment of single hands that promotes population, but that of men who have families ; and this circumstance must operate strongly, in giving so great a superiority to large farms. The variation from these rules, between, under, and over three hundred acres, is not great ; nor can any remark be totally unexceptionable.

We may draw from these tables this general corollary, which will state the case in the clearest manner :

That the farms most advantageous to population, without exceptions, are those from five hundred acres upwards ; and of such, those above a thousand acres are the superior ; those under five hundred acres much inferior.

I doubt not but you will allow me to add upon this conclusion, that the vulgar ideas, of great farms depopulating the kingdom, are here proved, from facts, to be false ; and not from one or two instances, but from the divisions of above seventy thousand acres of land ; of all soils, in all situations, and under a vast variety of circumstances ; throughout a line of

country extending above two thousand five hundred miles. I will not assert that the average of such a tour must be the average of the whole kingdom; but I may surely be allowed to think, that there is a much greater probability of it, than of the truth of random assertions, general reasonings, and vulgar prejudices, all deduced from opinion, and founded upon that, and partial instances. If facts do not give me this advantage, they will yield me nothing, and I will reject them in favour of *notions*, as more satisfactory evidence.

P R O D U C T.

THERE is something of uncertainty in this article: The products are the average of each neighbourhood, and the size of the farms is also the same average; consequently neither of them are drawn from particular farms; and as the average product is general, it includes that of all sizes; so that the result can only shew any general tendency of countries that are pretty strongly marked by large or small farms.

If the result is regular in favour or against large or small farms, there will be the greatest reason to suppose it occasioned by

by the *size* of the farms; but on the contrary, if there is great irregularity, not much can be decided from it.

Farms to 50 l. a year.

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
<i>Ayechurch</i>	40	27
<i>Fossen</i>	28	24
<i>Doncaster</i>	30	19
<i>Ecclesfield</i>	50	26
<i>Wilbersfort</i>	40	30
<i>Wentworth</i>	40	28
<i>Ditto</i>	40	28
<i>Ditto</i>	40	28
<i>Ditto</i>	40	28
<i>Ditto</i>	40	28
<i>Ditto</i>	40	28
<i>Ditto</i>	40	28
<i>Ditto</i>	40	28
<i>Gilsdale</i>	35	29
<i>Ditto</i>	35	29
<i>Swinton</i>	22	22
<i>Ditto</i>	22	22
<i>Ditto</i>	22	22
<i>Glenwelt</i>	30	40
<i>Ditto</i>	30	40
<i>Ditto</i>	30	40
<i>Keswick</i>	45	42
<i>Ditto</i>	45	42
	D d 3	<i>Ditto</i>

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
Ditto	— 45 —	42
Ditto	— 45 —	42
<i>Holme</i>	— 50 —	16
Ditto	— 50 —	16
Ditto	— 50 —	16
Ditto	— 50 —	16
<i>Kabers</i>	— 40 —	32
Ditto	— 40 —	32
Ditto	— 40 —	32
<i>Bowles</i>	— 50 —	19
Ditto	— 50 —	19
Ditto	— 50 —	19
<i>Ormskirk</i>	— 40 —	24
Ditto	— 40 —	24
Ditto	— 40 —	24
Averages	— 39 —	27

Farms from 50 to 100 l.

<i>Milton</i>	— 75 —	25
<i>Drayton</i>	— 70 —	30
<i>Whinmoor</i>	— 80 —	26
<i>Risby</i>	— 75 —	28
Ditto	— 75 —	28
<i>Holdernefs</i>	— 100 —	36
Ditto	— 100 —	36
Ditto	— 100 —	36
<i>Tborne</i>	— 75 —	32
Ditto	— 75 —	32
Ditto		

Ditto

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
Ditto	75	32
Ditto	75	32
<i>Driffeld</i>	75	24
<i>Newton</i>	70	22
Ditto	70	22
Ditto	70	22
Ditto	70	22
Ditto	70	22
Ditto	70	22
Ditto	70	22
<i>Nunnington</i>	60	23
Ditto	60	23
<i>Kirkleatham</i>	100	34
Ditto	100	34
Ditto	100	34
Ditto	100	34
Ditto	100	34
<i>Rookby</i>	95	26
Ditto	95	26
Ditto	95	26
Ditto	95	26
<i>Slensingford</i>	70	18
Ditto	70	18
Ditto	70	18
<i>Raby</i>	90	34
Ditto	90	34
Ditto	90	34
Ditto	90	34
Ditto	90	34

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
<i>Rotbury</i>	100	24
<i>Ditto</i>	100	24
<i>Ditto</i>	100	24
<i>Ditto</i>	100	24
<i>Cambo</i>	65	31
<i>Ditto</i>	65	31
<i>Ditto</i>	65	31
<i>Ascot</i>	55	25
<i>Ditto</i>	55	25
<i>Ditto</i>	55	25
<i>Ditto</i>	55	25
<i>Garflang</i>	95	35
<i>Ditto</i>	95	35
<i>Ditto</i>	95	35
<i>Henley</i>	70	24
<i>Ditto</i>	70	24
<i>Ditto</i>	70	24
<i>Mims</i>	100	25
<i>Ditto</i>	100	25
<i>Ditto</i>	100	25
<i>Ditto</i>	100	25
<i>Ditto</i>	100	25
<i>Ditto</i>	100	25
<i>Averages</i>	82	27

From

From 100 to 200 l.

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
<i>Wooburn</i>	— 175	— 24
<i>Wanden</i>	— 115	— 23
<i>Broughton</i>	— 150	— 28
<i>Ditto</i>	— 150	— 28
<i>Ditto</i>	— 150	— 28
<i>Ditto</i>	— 150	— 28
<i>Woolley</i>	— 110	— 24
<i>Stillington</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Ditto</i>	— 105	— 25
<i>Reddington</i>	— 155	— 29
<i>Ditto</i>	— 155	— 29
<i>Ditto</i>	— 155	— 29
<i>Kiplin</i>	— 110	— 26
<i>Ditto</i>	— 110	— 26
<i>Ditto</i>	— 110	— 26
<i>Ditto</i>	— 110	— 26
<i>Ditto</i>	— 110	— 26
<i>Ditto</i>	— 110	— 26
<i>Reverth</i>	— 115	— 23
<i>Ditto</i>	— 115	— 23
<i>Ditto</i>		<i>Ditto</i>

Counties.	Farms.	Average of Products.
Ditto	115	23
Ditto	115	23
<i>Altringham</i>	116	37
Ditto	116	37
Ditto	116	37
Ditto	116	37
<i>Knotsford</i>	115	42
Ditto	115	42
Ditto	115	42
Ditto	115	42
Ditto	115	42
<i>Holme's Chapel</i>	160	27
Ditto	160	27
Ditto	160	27
<i>Aston</i>	110	25
Ditto	110	25
Ditto	110	25
Ditto	110	25
<i>Hagley</i>	125	29
Ditto	125	29
Ditto	125	29
Ditto	125	29
Ditto	125	29
<i>Broomsgrove</i>	120	40
Ditto	120	40
Ditto	120	40
Ditto	120	40
<i>Perthore</i>	105	25
Ditto	105	25
		Ditto

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
Ditto	105	25
Harmondsworth	120	25
Ditto	120	25
Ditto	120	25
Ditto	120	25
Averages	126	28

From 200 to 300l.

Stevenage	300	26
Stamford	260	28
Gosworth	225	26
Ditto	225	26
Ditto	225	26
Ditto	225	26
Morpeth	265	21
Ditto	265	21
Ditto	265	21
Belford	300	38
Ditto	300	38
Ditto	300	38
Ditto	300	38
Ditto	300	38
Hetton	250	19
Ditto	250	19
Ditto	250	19
Ditto	250	19

Ditto

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
Ditto	— 250 —	19
Ditto	— 250 —	19
Ditto	— 250 —	19
<i>Shapp</i>	— 220 —	22
Ditto	— 220 —	22
Ditto	— 220 —	22
Ditto	— 220 —	22
Ditto	— 220 —	22
<i>Stone</i>	— 265 —	29
Ditto	— 265 —	29
Ditto	— 265 —	29
Ditto	— 265 —	29
Ditto	— 265 —	29
Ditto	— 265 —	29
<i>Shenstone</i>	— 210 —	34
Ditto	— 210 —	34
Ditto	— 210 —	34
Ditto	— 210 —	34
Ditto	— 210 —	34
Ditto	— 210 —	34
<i>Moreton</i>	— 275 —	30
Ditto	— 275 —	30
Ditto	— 275 —	30
Ditto	— 275 —	30
<i>Bensington</i>	— 220 —	38
Ditto	— 220 —	38
Ditto	— 220 —	38
Ditto	— 220 —	38
Ditto	— 220 —	38
		<i>Maidenhead</i>

<i>Counties.</i>	<i>Farms.</i>	<i>Average of Products.</i>
<i>Maidenhead</i>	— 275 —	31
<i>Ditto</i>	— 275 —	31
<i>Ditto</i>	— 275 —	31
<i>Ditto</i>	— 275 —	31
<i>Averages</i>	— 249 —	29

Farms above 300 l.

<i>Fenton</i>	— 500 —	28
<i>Ditto</i>	— 500 —	28
<i>Ditto</i>	— 500 —	28
<i>Ditto</i>	— 500 —	28
<i>Bendsworth</i>	— 520 —	40
<i>Ditto</i>	— 520 —	40
<i>Ditto</i>	— 520 —	40
<i>Ditto</i>	— 520 —	40
<i>Averages</i>	— 510 —	34

Recapitulation.

<i>Farms.</i>	<i>Rental.</i>	<i>Average Product.</i>
To 50 l. a year	— 39 l. —	27 bushels.
50 to 100 l.	— 82 l. —	27
100 to 200 l.	— 126 l. —	28
200 to 300 l.	— 249 l. —	29
Above 300 l.	— 510 l. —	34

The

The result of this enquiry much surprises me. General, as well as particular observation, has convinced numbers, in every part of the kingdom, that great farmers have better crops than little ones; and reason tells us, that it would be a miracle if it was not so; but that the rise of produce should be so regular with the greatness of the farms, when neither are taken from particular ones, but are the averages of the neighbourhoods, is surprising; and proves that the superiority of great farms must be immense; for most neighbourhoods have some large ones that unite with others to form each average; so that even the lowest articles in this scale include some advantage of great ones; consequently, as the general balance is in favour of them, it must inevitably have been exceeding great had the respective averages been deduced from single farms. And this observation is founded so strongly in this fact, that I cannot but esteem the circumstance decisive.

The increase of product with the size of the farms is so regular, that it cannot be attributed to chance. But there is another circumstance, which, if any thing was wanting to demonstrate this superiority, would, I apprehend, effectually do it;

it; it is the nature of the soil. We have found, throughout this tour, that large farms include very poor soils, which form a much greater proportion of their total, than of that of small ones; hence, if other circumstances were equal, they ought to yield much less crops; so that the average produce being *greater*, instead of less, shews clearly, that the circumstance of being divided into great ones is alone sufficient more than to ballance all other advantages. The comparison will appear somewhat clearer in the following state.

An hundred acres of corn	27	
and pulse in farms of a-		
above 300 l. a year,	425	0
yield		
Ditto in farms to 100 l. a		
year,	337	4

Superiority of the former,	87	4
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Above 300 l.	-	-	-	425	0
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Under 300 l.	-	-	-	346	3
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Superiority of the former,	-	78	5
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This proportion is as $8\frac{1}{2}$ to $6\frac{127}{136}$.

General

General Recapitulation.

First. That farms from two to four hundred acres are superior in **LIVE STOCK**, to smaller ones, as $5\frac{1}{2}$ to $3\frac{1}{2}$; and more than five times superior to larger farms.

Second. That farms of above five hundred acres, are, in **POPULATION**, superior to smaller ones, as $8\frac{1}{2}$ to $6\frac{1}{4}$.

Third. That farms of above 300 l. a year, yield a **PRODUCT** of corn and pulse superior to smaller ones, as $8\frac{1}{2}$ to $6\frac{127}{136}$.

337

8

425

346

8

LET-

L E T T E R XXXVII.

THE next article of rural œconomics which I shall trouble you with examining, is that of the sum requisite to stock farms, according to the various modes of husbandry, in different counties. This is a very important enquiry, and merits as much attention as can be given it.

Farms.		Stock.
Stillington,	{ 100 l. a year, half grass and half arable,	£. 300
	Ditto all arable,	200
Howden,	100	500
Thorne,	100	300
		Live stock, 50
		Implements, 25
		Furniture, 20
		Sundries, 75
		170
Around Wentworth,	{ 20 l. 40 acres, half grass and half arable,	
Driffild,	{ 100 l. half and half,	450
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		Newton,

Farms.		Stock.	
			£
Newton,	{ 100l. all ara- ble,	Live stock,	128
		Implements,	63
		Sundries,	310
			<u>501</u>
	Ditto half and half,		<u>600</u>
Nunnington,	{ 100l. half grafs half arable,		400
Kirkleatham,	100l. - - -		300
Gilsdale,	Ditto - - -		300
Schorton,	{ 100l. half grafs half arable,		350
Gilling,	{ 100l. half and half,		600
Rookby,	{ 100l. half and half,		400
Kiplin,	{ 100l. one third arable, two thirds grafs,		600
Mr. Crowe's husbandry,	{ 100l. - - -		650
Swinton,	50l. - - -		250
Craikbill,	90l. - - -		275
Slensingford,	100l. - - -		300
Danby,	{ 100l. half and half,		400
Afgarth,	50l. - - -		200
Raby,	100l. - - -		400
Goswarth,	100l. - - -		300
		Morpeth,	

	Farms.	Stock.
Morpeth,	100 l.	£. 450
Alnwick,	100 l.	300
Belford,	300 l.	1200
Hetton,	500 l.	1750
Fenton,	500 l.	2500
Rothbury,	100 l.	350
Cambo,	100 l.	300
Glenwelt,	100 l.	400
Ascot,	100 l.	300
Penrith,	100 l.	300
Keswick,	80 l.	380
Shapp,	100 l.	550
Holme,	50 l.	100
Kabers,	50 l.	150
Garstang,	150 l. grafs	500
	Ditto common	200
Ormskirk,	50 l.	150
		Live stock, 178
		Implements, 44
Altringham,	100 l.	Sundries, 85
		307
Knotsford,	50 l.	200
		Live stock, 172
		Implements, 40
Holmes-Cba- } pel,	100 l.	Sundries, 150
		362
		Stone,

	Farms.	Stock.
Stone,	100 l. - - - - -	350
Shenstone,	100 l. - - - - -	250
		Live stock, 274
		Implements, 57
Aston,	100 l. - - - - -	Sundries, 188
		519
Hagley,	100 l. - - - - -	550
Broomsgrove,	100 l. - - - - -	400
		Live stock, 1840
		Implements, 251
Bendsworth,	{ 500 l. 500 a- cres, half and half,	Furniture, 200
		Sundries, 980
		3271
Benfington,	100 l. - - - - -	300
Mims,	100 l. - - - - -	300

General average stock per 100 l. a year, is
391 l.

That of particulars as follow :

Live stock per 100 l. a year,	228
Implements ditto	63
Furniture,	70

Upon these sums it is in general to be remarked, that farms are universally understocked. Four hundred pounds are by no means a sufficient sum to stock the average farm of 100 l. a year, for complete husbandry ;

bandry; and there is not, in the whole range of rural œconomy, a more important object than the country being richly stocked. The best land is of no avail without a sufficient sum of money to render its fertility of use: Neither skill nor industry will make any amends for want of an ample stock. One of the most common, and yet most fatal errors, to which the conduct of a farmer is open, is that of understocking: Instances are innumerable; this average of the whole Tour is one, and speaks the thing very strongly. Suppose the farm for this average rent of 100 *l.* to be two hundred acres, half grass and half arable; an hundred acres of grass, at 10 *s.* will keep thirty cows; the arable hundred, thrown into that most beneficial course, of 1. turneps, 2. barley, 3. clover, 4. wheat; will summer keep, or fatten (with the assistance the grass will give after the cows) eighty sheep; and winter fatten on turneps, besides what is used for the other cattle, thirty steers of 6 *l.* value; reckoning the cows at 7 *l.* and the sheep at 15 *s.* this amount of cattle is 450 *l.* or, in other words, 59 *l.* more than the whole average stock of this farm.

If it be asked why farmers in general so much understock themselves; it is at once answered, by observing the universal prac-

tice of hiring more land than they ought : To be a farmer of two or three hundred pounds a year, is very flattering to the vanity of him who should occupy but an hundred. And this circumstance, uniting with the false idea of *much land, much profit*, occasions their acting so very contrary to their interest. I should also observe, that this mistaken conduct is of the utmost prejudice to the interest of the state ; for the public possession of a district perfectly cultivated is of as much national value as one of twice the extent but indifferently cultivated ; Suppose a rich farmer keeps an hundred cows, five hundred sheep, and fifty fatting beasts on a given number of acres ; the circulation of that business we will call of 50 *l.* profit to the public. Now it is very clear, if a poor farmer hires the same land, and understocks it by half, that the national profit will be but 25 *l.* Every cow, ox, and sheep is profitable to the nation, and the cultivators of the soil not being possessed of sufficient sums to stock their farms completely, reduces the number of cattle, and consequently diminishes that profit which arises to the state from the possession of circulating riches.

LETTER XXXVIII.

THE multiplicity of subjects which demand a particular review in the minutes of this tour is so great, that I am in every letter fearful of swelling it to too great a length ; and yet much of the utility, which attends such an undertaking, would be totally lost, if the average of every article was not stated, and compared with collateral circumstances that either do, or may probably affect it. The subject upon which I now enter, viz. the prices of provisions, is one of the most important that can engage the attention of the statesman. It ought to be known with the utmost perspicuity in every possible variation, and in every the most remote combination. Circumstances, that at first sight appear to have scarce any connection, are sometimes found, on a near inspection, to be intimately united.

The first view I shall offer of these prices, is that of butcher's meats, bread, butter, and cheese ; and the average of meats, with the distance of each place from *London*.

No.	Places.	Dist.	Bread	Butt.	Ch.	Mu	Beef.	Veal.	Pork.	Av.
1	Hatfield,	20	2	7	4	4	4	3½		3½
2	Stevenage,	32	2	7	3½	4	3½	4	4	3½
3	Offley,	34	2	7	3½	4	4	3½	4	3½
4	Houghton,	37	1½		4	4	3½	4	4	3½
5	Milton,	41	1½	7	4	3½	3½		4	3½
6	Wanden,	49	1½	7	4	4	3½	3	3½	3½
7	Broughton,		1½	6	4	3½	4			3½
8	Biddenham,	47	1½	6	4	4				4
9	Weston,	53	1½	7	4	4	3½	4	4	3½
10	Catworth,	57	2	6	4	3½	4	3½	4	3½
11	Ayckurch,	70	1½	6	4	3½	3½			3½
12	Casterton,	85		6	3	3	3	3		3
13	Byten,	92		4	4	3½	4	3½		3½
14	Paonton,	99		6	4	3	3½			3½
15	Fossen,	112		6	4	3	3½			3½
16	Cromwell,	123		6	4	3	4			3½
17	Drayton,	134		7	4	3	2½			2½
18	Cantler,	150		7	4	3	4	2		3
19	Coneybrough	155		6	4	3½	3	3		3
20	Rotherham,	161	1½	6	4	3½	3½	3	4	3½
21	Ecclesfield,	167	1½	8	3½	3½	3½	3	4	3½
22	Woolley,	165		6	4	3½	3½			3½
22	Wakefield,	178	1½	7		3½	3½	3		3½
23	Leeds,	190	1½ ^a	6½ ^b	4	4	4	2½	4	3½

^a Much oat bread.

^b Butter in most places reckoned by 18, 20, 22, or 24 ounces, but throughout all these tables I reduce it to 16 ounces.

24 Kid-

No.	Places	Dist.	Bread.	Butt.	Ch.	Mu	Beef.	Veal.	Pork.	Av.
24	Kiddel, } Whinmoor,	194		$6\frac{1}{2}$	4	$3\frac{1}{2}$	3	$2\frac{1}{2}$		3
25	Wilbersfort,	192		$6\frac{1}{2}$	2	$3\frac{1}{2}$	$3\frac{1}{2}$			$3\frac{1}{2}$
26	Hatton,	188		$6\frac{1}{2}$	$2\frac{1}{2}$	3	4			$3\frac{1}{2}$
27	Risby,	185		$5\frac{1}{2}$	$2\frac{1}{2}$	3	3	4		$3\frac{1}{2}$
28	Stillingfleet,	192	I	$5\frac{1}{4}$	2	$3\frac{1}{4}$	$3\frac{1}{2}$		$3\frac{1}{2}$	$3\frac{1}{2}$
29	Howden,	173	I	$5\frac{1}{4}$	3	$3\frac{1}{2}$	$3\frac{1}{2}$			$3\frac{1}{2}$
30	Thorne,	168	I	4	3	$3\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{4}$	$3\frac{1}{2}$
31	Around } Wentworth,	155	I	6	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{4}$	$2\frac{1}{2}$		3
32	Drifffield,	200	$\frac{3}{4}$	6	2	3	3			3
33	Honanby,	225	$1\frac{1}{2}$	6	2	$3\frac{1}{4}$	3			3
34	Newton,	220	$\frac{3}{4}$	$5\frac{1}{2}$	2	3	3	3	4	$3\frac{1}{4}$
35	Nunnington,	225	$\frac{3}{4}$	$4\frac{1}{2}$	2	3	3		4	$3\frac{1}{4}$
36	Kirby,	238	$1\frac{1}{4}$	$7\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4		$3\frac{1}{2}$
37	Kirkleatham,	260	$1\frac{1}{4}$	$6\frac{1}{4}$	$1\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4	$3\frac{1}{2}$
38	Schorton,	240	$1\frac{1}{4}$	$6\frac{1}{2}$	2	3	3	$3\frac{1}{2}$		3
39	Gilling,	264	$1\frac{1}{2}$	$7\frac{1}{2}$	$2\frac{1}{2}$	3	3			3
40	Rookby,	270	$1\frac{1}{2}$	6	$2\frac{3}{4}$	$3\frac{1}{2}$	$3\frac{1}{2}$	2		3
41	Brough,	280	$1\frac{1}{4}$	$6\frac{1}{4}$	$2\frac{1}{2}$	3	$3\frac{1}{2}$	$2\frac{1}{2}$		3
42	Fremington,	230	*	$5\frac{3}{4}$	$2\frac{1}{4}$	3	3	$3\frac{1}{2}$	3	3
43	Kiplin,	238	$1\frac{1}{4}$	$5\frac{1}{4}$	2	$2\frac{3}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	$3\frac{1}{2}$	$2\frac{3}{4}$
44	Swinton,	230		$5\frac{1}{4}$	2	3	3	3	$3\frac{1}{2}$	3
45	Craikbill,	232	I	$5\frac{1}{4}$	$1\frac{3}{4}$	$3\frac{1}{4}$	$3\frac{1}{4}$		$3\frac{1}{2}$	$3\frac{1}{4}$
46	Slensingford,	232	I	5	2	3	3		$3\frac{1}{2}$	3

* Much oat bread.

47 Danby,

No.	Places	Dist.	Bread.	Butt.	Ch.	Mu	Beef.	Veal	Pork.	Av.
47	Danby,	235	I	6 $\frac{1}{4}$	2	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3	4	3 $\frac{1}{2}$
48	Asgarib,	240	I	5 $\frac{1}{2}$	2	3	3 $\frac{1}{2}$			3 $\frac{1}{4}$
49	Raby,	250	I ^a	6 $\frac{1}{2}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4	3 $\frac{1}{2}$
50	Newcastle,	276	b ³ / ₄	7	1 $\frac{1}{2}$	2 $\frac{1}{2}$	3	2		2 $\frac{1}{4}$
51	Morpeth,	291	c	8	2	3	3	3	4	3 $\frac{1}{4}$
52	Ainwick,	310	d	6	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2	3	2 $\frac{1}{2}$
53	Belford,	325	d	5 $\frac{1}{4}$	3	2 $\frac{1}{2}$	3 $\frac{1}{2}$	2		2 $\frac{1}{2}$
54	Hetton,	325	d	5	2	2 $\frac{1}{2}$	3	2	3	2 $\frac{1}{2}$
55	Fenton,	330	d	5	2 $\frac{1}{2}$	3	3	2	3	2 $\frac{1}{4}$
56	Rothbury,	301	d	5	2 $\frac{1}{2}$	3	4	2 $\frac{1}{4}$	3 $\frac{1}{2}$	3
57	Cambo,	290	e	4 $\frac{1}{4}$	2	3	3			3
58	Glenwelt,	276	f	6	2	2 $\frac{1}{2}$	3	2	3	2 $\frac{1}{2}$
59	Ascot,	296	g ³ / ₄	6	2	2	3	2 $\frac{1}{2}$	4	2 $\frac{1}{4}$
60	Penrith,	282	g ³ / ₄	5 $\frac{1}{4}$	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2	3	2 $\frac{1}{2}$
61	Keswick,	286	h ³ / ₄	5 $\frac{1}{4}$	2	2 $\frac{1}{2}$	2	2	3	2 $\frac{1}{4}$
62	Shapp,	268	i	6	2 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{4}$	2 $\frac{3}{4}$
63	Kendal,	256	i ^k	6 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	2 $\frac{1}{2}$	4 $\frac{1}{2}$	3 ^l
64	Holme,	246	i ³ / ₄	5 $\frac{1}{2}$	3	2	2 $\frac{1}{2}$	2	4	2 $\frac{1}{2}$
65	Kabers,	230	i ³ / ₄	8	3	2 $\frac{1}{2}$	2 $\frac{1}{2}$		4	3
66	Garstang,	223	i ³ / ₄	7	3	3	3		3	3
67	Warrington,	182	m	7 $\frac{1}{2}$	3 $\frac{1}{2}$	3	3	3	4	3 $\frac{1}{4}$

^a Mazlin.^b Rye.^c Rye; wheat and pease; barley and pease.^d Barley and pease.^e Rye, mazlin and barley.^f Barley and pease; and beans and oatmeal.^g Barley; and barley and rye.^h Oat and barley.ⁱ Oat.^k Oatmeal cakes.^l The rise of prices at Kendal from the preceding must be owing to her numerous manufactures.^m Oat and barley mixed.

No.	Places.	Dist.	Bread.	Butt.	Ch.	Mu	Beef.	Veal.	Pork.	Av.
68	Liverpool,	200	$1\frac{1}{2}$	7	$3\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	4	4	$3\frac{1}{2}$
69	Altringham,	180	^a	6	$3\frac{1}{2}$	3	$2\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{1}{2}$	3
70	Knotsford,	170	^b	6	$2\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	4	4	$3\frac{1}{2}$
71	Holmes- Chapel,	} 158	^b	6	$3\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$
72	Newcastle under Line,	} 150	^c	8	3	3	3	3		3
73	Shenstone,	117	^c	7	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$		3	$2\frac{1}{2}$
74	Aston,	112	^d	8	$2\frac{1}{2}$	2	$2\frac{1}{4}$		$3\frac{1}{4}$	$2\frac{1}{2}$
75	Hagley,	110	$1\frac{1}{2}$	6	4	$3\frac{1}{4}$	3	3	$3\frac{1}{2}$	3
76	Broomsgrove,	118	$1\frac{1}{2}$	$6\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	3	$2\frac{1}{2}$	4	$3\frac{1}{4}$
77	Perthore,	102	$1\frac{1}{4}$	7	3	3	3	2	4	3
78	Bendsworth,	96	$1\frac{1}{2}$	8	$3\frac{1}{2}$	3	$2\frac{1}{4}$	3	$3\frac{1}{2}$	3
79	Moreton,	85	$1\frac{1}{2}$	7	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	4	$3\frac{1}{2}$
80	Bensington,	47	$1\frac{1}{4}$	6	4	$3\frac{1}{2}$	$3\frac{1}{2}$	3	4	$3\frac{1}{4}$
81	Henley,	35	1	7	4	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4	$3\frac{1}{2}$
82	Maidenhead,	27	$1\frac{1}{4}$	7	$4\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4	4	$3\frac{1}{4}$
83	Harmsworth,	16	$1\frac{1}{2}$	7	4	$3\frac{1}{2}$	$3\frac{1}{2}$	4	4	$3\frac{1}{4}$
84	Kensington,	2	$1\frac{1}{4}$	8	$4\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	4	$3\frac{1}{4}$
85	Mims,	17	$1\frac{1}{2}$	8	$4\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$4\frac{1}{2}$	4
Averages			[*]	$1\frac{1}{4}$	6	3	3	3	$3\frac{1}{2}$	3

^a Wheat and barley mixed. ^b Barley. ^c Mazlin.

^d Wheaten, notwithstanding the similarity of price; when not remarked as other sorts, it is always wheaten.

Average price of wheaten bread $1\frac{1}{4}$.

* N. B. The distances, I fear, are not absolutely accurate; but the variations are very small, and in calculating the averages will not amount to any thing.

Upon

Upon these averages it is in general to be observed, that all the prices are moderate. Bread at $1d.\frac{1}{2}$ per lb. wheaten, as well as other sorts, is as reasonable as any one can desire it. Butter at $6d.$ is higher, I think, than bread, but cannot, upon the whole, be thought extravagant. All sorts of butcher's meat at $3d.$ is middling; it is not very dear, nor is it very cheap; but it certainly calls for no such clamour as we have lately heard through the kingdom, on account of its being so high: I was plainly suppositious.

We must, in the next place, examine these prices in comparison with the distance from the capital.

Fifty miles round London.

	Bread.	Butter.	Cheese.	Average of meats.
N ^o 1	2	7	4	$3\frac{3}{4}$
2	2	7	$3\frac{1}{2}$	$3\frac{1}{2}$
3	2	7	$3\frac{1}{2}$	$3\frac{1}{2}$
4	$1\frac{1}{2}$		4	$3\frac{1}{4}$
5	$1\frac{3}{4}$	7	4	$3\frac{1}{2}$
6	$1\frac{3}{4}$	7	4	$3\frac{1}{2}$
7	$1\frac{3}{4}$	6	4	$3\frac{1}{4}$
8	$1\frac{3}{4}$	6	4	4
80	$1\frac{1}{2}$	6	4	$3\frac{1}{4}$

N^o

	Bread.	Butter.	Cheese.	Average of meats.
No 81	1	7	4	$3\frac{1}{2}$
82	$1\frac{1}{4}$	7	$4\frac{1}{2}$	$3\frac{3}{4}$
83	$1\frac{1}{2}$	7	4	$3\frac{1}{2}$
84	$1\frac{1}{4}$	8	$4\frac{1}{2}$	$3\frac{1}{4}$
85	$1\frac{1}{2}$	8	$4\frac{1}{4}$	4
Av.	$1\frac{1}{2}$	$6\frac{3}{4}$	4	$3\frac{1}{4}$

From 50 to 100 miles.

9	$1\frac{1}{4}$	7	4	$3\frac{1}{4}$
10	2	6	4	$3\frac{1}{2}$
11	$1\frac{1}{4}$	6	4	$3\frac{1}{2}$
12		6	3	3
13		4	4	$3\frac{1}{2}$
14		6	4	$3\frac{1}{4}$
78	$1\frac{1}{2}$	8	$3\frac{1}{2}$	3
79	$1\frac{1}{2}$	7	$3\frac{1}{2}$	$3\frac{1}{2}$
Av.	$1\frac{1}{2}$	6	$3\frac{1}{4}$	$3\frac{1}{4}$

From

From 100 to 200 miles.

	Bread.	Butter.	Cheese.	Average of meats.
N ^o 15		6	4	$3\frac{1}{4}$
16		6	4	$3\frac{1}{4}$
17		7	4	$2\frac{1}{2}$
18		7	4	3
19		6	4	3
20	$1\frac{1}{2}$	6	4	$3\frac{1}{2}$
21	$1\frac{1}{4}$	8	$3\frac{1}{2}$	$3\frac{1}{2}$
22		6	4	$3\frac{1}{2}$
22	$1\frac{1}{4}$	7		$3\frac{1}{2}$
23	$1\frac{1}{4}$	$6\frac{1}{2}$	4	$3\frac{1}{4}$
24		$6\frac{1}{2}$	4	3
25		$6\frac{1}{2}$	2	$3\frac{1}{2}$
26		$6\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$
27		$5\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$
28	1	$5\frac{1}{4}$	2	$3\frac{1}{2}$
29	1	$5\frac{1}{4}$	3	$3\frac{1}{2}$
30	1	4	3	$3\frac{1}{2}$
31	1	6	$3\frac{1}{2}$	3
67		$7\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$
68	$1\frac{1}{2}$	7	$3\frac{1}{2}$	$3\frac{1}{2}$
69		6	$3\frac{1}{2}$	3

[43^I]

N ^o	Bread.	Butter.	Cheese.	Average of meats.
70		6	2½	3½
71		6	3½	3½
72	1	8	3	3
73	1	7	2½	2½
74	1	8	2½	2½
75	1½	6	4	3
76	1½	6½	3½	3½
77	1½	7	3	3
Ave.	1½	6	3½	3

From 200 to 300 miles.

32	¾	6	2	3
33	1½	6	2	3
34	¾	5½	2	3½
35	¾	4½	2	3½
36	1½	7½	2½	3½
37	1½	6½	1½	3½
38	1½	6½	2	3
39	1½	7½	2½	3
40	1½	6	2½	3
41	1½	6½	2½	3
42		5½	2½	3

N^o

No	Bread.	Butter.	Cheese.	Average of meats,
43	$1\frac{1}{2}$	$5\frac{1}{2}$	2	$2\frac{1}{2}$
44	$1\frac{1}{2}$	$5\frac{1}{2}$	2	3
45	$1\frac{1}{2}$	$5\frac{1}{2}$	$1\frac{1}{2}$	$3\frac{1}{2}$
46	$1\frac{1}{2}$	5	2	3
47	$1\frac{1}{2}$	$6\frac{1}{2}$	2	$3\frac{1}{2}$
48	$1\frac{1}{2}$	$5\frac{1}{2}$	2	$3\frac{1}{2}$
49	$1\frac{1}{2}$	$6\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$
50	$\frac{3}{4}$	7	$1\frac{1}{2}$	$2\frac{1}{2}$
51	$\frac{3}{4}$	8	2	$3\frac{1}{2}$
57		$4\frac{1}{2}$	2	3
58		6	2	$2\frac{1}{2}$
59	$\frac{1}{2}$	6	2	$2\frac{1}{2}$
60	$\frac{1}{2}$	$5\frac{1}{2}$	2	$2\frac{1}{2}$
61	$\frac{1}{2}$	$5\frac{1}{2}$	2	$2\frac{1}{2}$
62		6	$2\frac{1}{2}$	$2\frac{1}{2}$
63	$1\frac{1}{2}$	$6\frac{1}{2}$	$3\frac{1}{2}$	3
64	$\frac{3}{4}$	$5\frac{1}{2}$	3	$2\frac{1}{2}$
65	$\frac{1}{2}$	8	3	3
66	$\frac{1}{2}$	7	3	3
Aver.	1	6	2	$2\frac{1}{2}$

Upwards

Upwards of 300 miles.

	Bread.	Butter.	Cheese.	Average of meats.
N ^o 52	—	6	$2\frac{1}{2}$	$2\frac{1}{2}$
53	—	$5\frac{1}{4}$	3	$2\frac{1}{2}$
54	—	5	2	$2\frac{1}{2}$
55	—	5	$2\frac{1}{2}$	$2\frac{3}{4}$
56	—	5	$2\frac{1}{2}$	3
Aver.	—	5	$2\frac{1}{2}$	$2\frac{1}{2}$

Recapitulation.

To 50 miles	$1\frac{1}{2}$	$6\frac{3}{4}$	4	$3\frac{1}{2}$
50 to 100	$1\frac{1}{2}$	6	$\frac{3}{4}$	$3\frac{1}{4}$
100 to 200	$1\frac{1}{4}$	6	$3\frac{1}{4}$	3
200 to 300	1	6	2	$2\frac{3}{4}$
300 upwards	—	5	$2\frac{1}{2}$	$2\frac{1}{2}$

The influence of the capital appears very strongly in this table. It is apparent even in the article bread, which one would suppose, in reason, not to be much affected. The equality of the price of butter surprises me: But even that is dearest near *London*, and cheapest the farthest from it: But the sameness from fifty to three hundred

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dred miles contradicts so far the general tenor of the table. Cheese, near the capital, is double the price it is at a distance from it; but this circumstance requires some explanation. Scarce any cheese is made around *London*: It answers so much better to make butter, and to suckle, that the quantity of cheese made is very trifling; but the cheese of the western counties is to be had through all *England* nearly as cheap as at *London*; but the poor do not eat it as their brethren do around *London*: They consume only their own country cheese, of a much poorer sort.

The variations in the prices of butcher's meat are so regular; the fall so unbroken, in proportion to the distance from the capital, that one cannot but attribute it to the distance. The fall of price is regular, even in circumstances that one would apprehend sufficient totally to destroy it. The populous manufacturing counties of *Lancaster*, and the West Riding of *Yorkshire*, I expected to find as dear as *London*; but, on the contrary, the fall of price is regular throughout them. If this regularity of variation is not owing to the distance from *London*, I know not to what to attribute it; nor can any other satisfactory account be given for it.

You

You will next allow me to review the other particulars of the poor's house-keeping, &c. which were minuted throughout the Tour; but some of these I shall omit. Milk is, in general, of a uniform price; the variations not considerable enough to give rise to any conjectures of causes. Potatoes depend on the quantity cultivated; and as to candles and soap, the uniformity of price throughout the kingdom is surprising. The remaining articles, to which I shall confine myself, are *House-rent*, *Firing*, and *Wear of Tools*.

Places.	H. Rent.	Firing.	Tools.
	l. s. d.	l. s. d.	l. s. d.
Hatfield,	2 15 0	2 0 0	1 5 0
Stevenage,	2 0 0	0 0 0	1 1 0
Offley,	2 2 6	1 10 0	1 10 0
Houghton,	2 0 0	2 10 0	0 12 0
Milton,	1 10 0	1 5 0	0 6 0
Wanden,	2 0 0	0 0 0	0 15 0
Broughton,	1 0 0	2 10 0	1 0 0
Hale Weston,	1 7 6	1 10 0	1 0 0
Catworth,	1 0 0	1 5 0	0 8 6
Aychurch,	0 3 9	2 10 0	0 8 0
Casterton,	0 14 0		
Byten,	0 19 0	1 10 0	
Paonton,	2 10 0	2 0 0	
Fossen,	0 15 0	1 10 0	

Places.	H. Rent.	Firing.	Tools.
	l. s. d.	l. s. d.	l. s. d.
Cromwell,	1 5 0	1 0 0	
Drayton,	1 0 0	1 15 0	0 14 0
Cantler,	1 10 0	1 0 0	0 5 0
Coneyshrough,	1 10 0	1 4 0	0 5 0
Ecclesfield,	2 0 0	1 0 0	0 6 0
Woolley,	1 10 0	0 12 0	
Wakefield } Manufactures, }	2 5 0	1 0 0	
Leeds ditto.	2 0 0	1 0 0	
Kiddel,	0 18 0	1 0 0	0 5 0
Wilbersfort,	1 0 0	1 10 0	
Hatton,	1 0 0	1 0 0	0 10 0
Risby,	1 0 0	0 5 0	0 15 0
Stillington,	1 0 0	1 0 0	0 5 0
Howden,	1 10 0	0 15 0	
Thorne,	1 5 0	0 12 0	0 5 0
Wentworth,	1 5 0	0 12 0	0 4 0
Driffild,	1 10 0	1 10 0	0 0 0
Newton,	0 18 0	1 5 0	0 5 0
Nunnington,	1 0 0	1 5 0	0 10 0
Kirby,	1 5 0	0 10 0	0 5 0
Kirkleatham,	1 0 0	1 10 0	0 2 6
Schorton,	1 0 0	1 8 0	0 5 0
Gilling,	0 18 6	1 10 0	0 3 6
Rookby,	0 5 0	2 10 0	0 3 6
Brough,	1 10 0	1 0 0	
Fremington,	1 5 0	1 15 0	
Kiplin,	1 5 0	0 16 0	0 3 0

Places.

Places.	H. Rent.	Firing.	Tools.
	l. s. d.	l. s. d.	l. s. d.
Swinton,	1 7 6	0 15 0	0 6 0
Craikhill,	1 5 0	1 0 0	0 10 0
Slensingford,	0 15 0	0 0 0	0 5 0
Danby,	0 17 6	0 17 6	0 12 2
Afgarth,	0 15 0	1 10 0	0 5 0
Raby,	1 15 0	1 5 0	0 0 0
Newcastle,	1 10 0	1 10 0	
Gosworth,	1 10 0	1 10 0	
Morpeth,	0 10 0	0 10 0	
Alnwick,	1 0 0	1 0 0	0 9 0
Belford,	1 0 0	1 4 0	0 0 0
Hetton,	0 10 0	0 15 0	0 0 0
Berwick,	1 0 0	1 5 0	
Fenton,	0 10 6	1 0 0	0 0 0
Rothbury,	0 15 0	1 0 0	
Cambo,	0 10 0	0 16 0	
Glenwelt,	0 15 0	0 10 0	
Aftot,	0 15 0		
Penrith,	1 0 0	1 10 0	
Keswick,	1 0 0	1 5 0	
Shapp,	1 10 0	1 5 0	
Kendal } Manufactures, }	1 10 0	2 7 6	
Holme,	1 2 6	1 7 6	
Kabers,	1 0 0	1 0 0	0 10 6
Garflang,	1 7 6	1 10 0	
Warrington } Manufactures, }	1 5 0	0 16 0	

Places.	H. Rent.	Firing.	Tools.
	<i>l. s. d.</i>	<i>l. s. d.</i>	<i>l. s. d.</i>
Liverpool,	1 5 0	0 17 6	
Altringham,	1 10 0	1 0 0	
Knotsford,	2 5 0	1 0 0	
Holmes-chapel,	1 7 6	1 1 0	
Newcastle Manufactures, }	2 12 6	1 2 6	
Stone,	0 11 3		
Shenstone,	1 15 0	1 10 0	
Aston,	2 0 0	1 5 0	0 7 6
Hagley,	2 15 0	1 10 0	0 5 0
Brooms-grove,	2 0 0	1 10 0	
Perthore,	1 5 0	1 10 0	0 10 0
Bendsworth,	0 12 6	1 5 0	0 2 6
Moreton,	1 15 0	0 0 0	
Bensington,	1 10 0	1 5 0	0 2 6
Henley,	2 5 0	2 0 0	0 8 9
Maidenhead,	2 10 0	2 10 0	0 5 0
Harmond- worth, }	3 15 0	0 0 0	0 7 6
Kensington,	5 0 0		
North Mims,	3 10 0	0 0 0	0 7 6
Averages,	1 8 2	1 3 11	0 7 11

These averages are moderate, and shew that the labouring poor in this kingdom are by no means severely burthened in any of these articles of expence.

House

		l.	s.	d.
House rent,	- - -	1	8	2
Firing,	- - -	1	3	11
Tools,	- - -	0	7	11

Total, 3 0 0

This amount will, in no part of the kingdom, be found of an unreasonable height.

F f 4 LET

L E T T E R XXXIX.

THE price of labour is allowed by all to be one of the most important objects in political œconomy. Agriculture, arts, manufactures, and commerce, are but so many aggregates of labour: Every circumstance that can affect the prosperity of a nation, is intimately connected, and even founded on labour. All nations subsist by labour: where trade is neglected, labour is nothing more than the measure of subsistence; but in commercial states it is the measure of riches, which include every thing else. The grand point respecting labour, is *the quantity* that is *well performed*; and it is obvious enough that the price of it must have considerable effect on the quantity: By various methods of stating, we shall be able to discover the peculiar circumstances attendant upon *high, low, and middling prices*; and, perhaps, more than conjecture the advantages or disadvantages of the present average rates throughout this tour. I shall begin with the labour of husbandry. But as the prices are seldom to be found in single sums without some other consideration besides money, such must be valued; board, ale, beer, milk,

milk, &c. I proceeded in this method in the Six Weeks Tour, but as provisions in general are much cheaper in the north than in the south, all the rates I there used will not be of the same truth here.

Board in the north (including *York* and *Lancashire*) I shall call 8 *d.* a day.

In the south, 10 *d.*

Ale, 2 *d.*

Small beer, 1 *d.*

Milk, $\frac{1}{2}$.

Broath, 2 *d.*

A dinner, 4 $d\frac{1}{2}$. in the north.

In the south 6 *d.*

In respect to the periods of labour, they are minuted throughout the Tour in the divisions of harvest, hay-time, and winter; in most of the counties I travelled, the winter price does not vary for spring; but as in a few there is a price between the winter and the hay ones, we must reckon the latter somewhat longer than common.

Harvest I call five weeks.

Hay time six weeks*.

Winter forty-one weeks.

And as much work is, in many places, done by the piece, I shall, in some places where it lessens the day work greatly, allow a proportion for it. I shall likewise add the distance from *London*.

* In many parts of the north of *England* their hay time is of a surprizing length.

No.	Places.	Dist.	Pay per week.			Medium.
			Harv.	Hay.	Wint.	
1	Hatfield,	20	13 3	9	6 6	7 6 ^a
2	Stevenage,	32	12	9 6	6 6	7 4
3	Offley,	34	15	11	6	7 3 ^a
4	Houghton,	37	15	11	7	8 ^a
5	Milton,	41	14 ^b 3	8 6	5 6	6 6 ^a
6	Wanden,	49	13 9	11	5	6 4 ^a
7	Broughton,		13	9	5 6	6 5 ^a
8	Astwick,	46	15	8	4 3	5 6 ^a
9	Biddenham,	47	15	8	4 6	5 6 ^c
10	Hale Weston,	53	14 6	9 6	6 6	7 5 ^d
11	Catworth,	57	13	9 6	4 9	5 10 ^{d e}
12	Aychurch,	70	13 3	11	4 9	6 1 ^d
13	Casterton,	85	12 6	11	6	7 2
14	Paenton,	99	0 9 0		6	7 ^f
15	Fossen,	112	11	11	8 6	9
16	Cromwell,	123	11	11	9	9 4
17	Drayton,	134	11	11	9	9 4
18	Cantler,	150	10	10	9	9 2
19	Coneybro',	155	10	10	6 6	7 2
20	Ecclesfield,	167	10	8 6	6	6 8
21	Woolley,	165	8	7 ^h	4 9	5 3

^a Harvest four weeks.

^b 2 s. for carriage of wood.

^c Harvest four weeks, and hay three.

^d Harvest four weeks.

^e Carriage of wood 2 s.

^f Begin June to Michaelmas 9 s. seventeen weeks summer, and thirty-five winter.

^g 10 s. for mowing, so I call it 8 s. 6 d.

^h 8 s. mowing, I call it 7 s.

No.

No.	Places.	Dist.	Pay per week.			Medium.
			Harv.	Hay.	Wint.	
22	Kiddel,	194	10	7 ^a	6	6 6
23	Wilbersfort,	192	11 6	7 ^b	4	5
24	Hatton,	188	13	13	7	8 5
25	Risby,	185	12 6		7	8 5 ^c
26	Stillingfleet,	192	13	13	8	9
27	Holderness,	193	14	14	8 6	9 7
28	Howden,	173	9 6	7	6	6 5
29	Thorne,	168	12 6	9 6	6	7
30	Wentworth,	155	10	10	6	6 10
31	Driffeld,	200	13	11	6 6	7 7
32	Yeddingham,	225	14 6	11 6	9	9 9
33	Newton,	220	14	14	8	9 3
34	Nunnington,	225	10	10	7	7 7
35	Kirby,	238	8 6	8 6	7	7 3
36	Kirkleatham,	260	10 6	9	5	5 11
37	Schorton,	240	7 9	7 ^d	6	6 3
38	Gilling,	264	15	7 ^e 6	5	6 3
39	Rookby,	270	16	10	8	9
40	Fremington,	260		7	6	6 1
41	Kiplin,	238	10	10	5	6
42	Swinton,	230	9 4	10 ^f	7	7 6
43	Craikhill,	232	6 6	6 6	4 9	5 1
44	Sleningford,	232	6 3	7 6	4 9	5 2
45	Danby,	235	7 6	6	5	5 4

^a 8 s. mowing; I call it 7 s.

^b Nothing specified; I call it, therefore, like the preceding.

^c 12 s. 6 d. for 14 weeks, the rest 7 s.

^d Not minuted; I call it proportioned to the preceding.

^e 6 s. 6 d. but as mowing is very high, 2 s. 6 d. I call it 7 s. 6 d.

^f 11 s. 6 d. but as it is for mowing I call it 10 s.

46 *Asgarth,*

Pay per week.

No.	Places.	Dist.	Harv.	Hay.	Wint.	Mediums.
46	Asgarth,	240	7 6	7 6	7	7 1
47	Raby,	250	9 9	8	6	6 6
48	Gosworth,	279	9 6	12 6	6	7
49	Morpeth,	291	10	9 6	5	6
50	Alnwick,	310	8 3	8 3	5	5 8
51	Belford,	325	6	6	5	5 2
52	Hetton,	325	9	6 6	4 6	5 1
53	Fenton,	330	9	9	6	6 7
54	Berwick,	340	6	6	5	5 2
55	Rothbury,	301	10 9	8 9	6	6 9
56	Cambo,	290	10	10	8 6	8 9
57	Glenwelt,	276	8	7	7	7 1
58	Ascot,	296	8	10	8	8 2
59	Penrith,	282	9 6	8 6	5 6	6 2
60	Keswick,	286	6 6	6 6	7	6 10
61	Shapp,	268	8 6	11 6	7	7 7
62	Holme,	246	10	10	7	7 7
63	Kabers,	230	10	10	7	7 7
64	Garflang,	223	10	9	7	7 6
65	Ormskirk,	200	6	4	5	4 11
66	Altringham,	180	7 3	6 6	5	5 4
67	Knotsford,	170	9 6	9 6	6	6 9
68	Holm's-Chapel,	158	14	14	7	8 5
69	Stone,	141	9 6	7 6	6 6	6 10
70	Shenstone,	117	6 6	6 6	5 6	5 8
71	Aston,	112	11	11	8	8 7
72	Hagley,	110	11	11	6 6	7 5
73	Broomsgrrove,	118	11	11	6	7
74	Pershore,	102	11	11	6	7

75 Bends-

No.	Places.	Dist.	Pay per week.			Medium.
			Harv.	Hay.	Wint.	
75	Bendsworth,	96	11	9 6	6 6	7 3
76	Moreton,	85	13	9 6	6	7
77	Bensington,	47	15	6 6	6 6	7 1 ^a
78	Henley,	35	12 6	9 6	6 6	7 5
79	Maidenhead,	27	14	9 6	6 6	7 6
80	Harmondsworth,	} 16	12 6	8 6	6 6	7 3
81	Kensington,		12 6	9 6	9	9 4
82	Mims,	17	14 3	9	7	7 9 ^a
Averages			10 8	9 5	6 5	7 1

I do not think there is much reason to find fault with any of these average prices as exorbitant, or higher than a flourishing agriculture can well afford to pay, nor are any of them so low as to oppress the labouring poor; there not being above one or two places where any allowance is made for *piece work*, whereas much is every where done; and it is universally known that they earn more in that manner than the weekly pay of the country; this circumstance is not divisible, but it undoubtedly raises the average.

The general average prices in proportion to the distance from *London* are as follow.

	s.	d.
To 50 miles, - - -	7	1
From 50 to 100, - -	6	9

^a Harvest 4 weeks.

From

From 100 to 200, - - 7 2

From 200 to 300, - - 7 0

Upwards of 300, - - 5 8

This table is not, upon the whole, absolutely decisive of the influence of the capital on the prices of labour: The fall, proportioned to distance, being broken in the middle; fifty miles round *London* is not so dear a circle as one hundred to two hundred; from fifty to one hundred is much cheaper, and upwards of three hundred vastly lower still; but from one hundred to three hundred the price is equal to the *London* ones, and the occasion is what I can by no means conjecture. Within those distances are included part of two counties remarkably full of manufactures; but many reasons will hereafter prove that this is a circumstance totally without effect.

But before I proceed with these observations, we must take a similar view of other species of labour, the wages of servants and women: And as to the prices of their eating and drink, I shall reckon every article two thirds that of the men.

Board in the north, 5 *d.*

— in the south, 6 *d.*

A dinner 3 *d.* in the north.

In the south, 4 *d.*

Ale, $\frac{1}{2}$.

Small beer, $\frac{1}{2}$.

Milk, $\frac{1}{2}$.

Places.

Places. No.	First Men.		Second ditto.		Lads.		Average.			Dairy- Maid.		Other ditto.		Average.			Women per week.								
	l.	s.	l.	s.	l.	s.	l.	s.	d.	l.	s.	l.	s.	l.	s.	d.	Har- vest.	s.	d.	Hay.	s.	d.	Win- ter.	s.	d.
25	12		12		7		10			5															
26	11		8		6 ^a		8	6		5		4	4	4	12										
27	13		9		5		9			3	15	3	15	3	15										
28	11		11		4 ^a		8	13		4		4		4											
29	11	11	11	11	4 ^a		9			3	5	3	5	3	5										
30	9	10	7	10	4		7			3		3		3			6	9		3	3	2	6		
31	13	10	8	10	1	15	7	18		4	15	4		4	7	6	7	6		3	6				
33	11	10	5		2 ^a		6	3		5		4	15	4	17	6	4	9		3	9	2			
34	12	10	5	10	3	10	7	3		4	10	3	10	4			4	6		3		3	6		
35	8		5		2		5																		
36	12	10	10		3		8	10		5		4		4	10		8	6		4		2			
37	12		9		4		8	6	6	4		4		4			7	9		3	3	2	6		
38	12		5	10	4 ^a		7	3		4	10	3	10	4			7	6		3		2	6		
39	12		4		3 ^a		6	6		5	10	3		4	5		14	6		11	6	5	6		
40	9		7		2	10	6	3		4		4		4						4	6				
41	13		10		4		9			5		3	10	4	5		5	3		3		2	6		
42	11	10	7		3		7	3		5		3	17	4	8	6	5	6		3	9	3			
43	10	15	9		3	10	7	13		4	10	3	10	4			5	3		3	9	2	6		
44	12		9		4	10	8	10		5		4		4	10		5			3		3			
45	15		8		4 ^a		9			5	10	4		4	15		5	3		4					
46	10	10	7		3 ^a	10	7			3	10	3		3	5		5	6		5	6	4	6		
47	13		11		6		10			5		4		4	10		7			3	6	2	3		
48	12		8	10	3		7	16	6	4		3	10	3	15		5	6		3		3			
49	11		7		3		7			3	10	3		3	5		4	9		3					
50	9		6		3		6			4		4		4			7			3					

Places.

Places. No.	First Men. l. s.	Second ditto. l. s. d.	Lads. l. s.	Average.			Dairy Maids. l. s.	Other Maids. l. s.				Average.			Women per week.		
															Har- vest. s. d.	Hay. s. d.	Win- ter. s. d.
51	9	7 7	5	7	2		3	33	33	33	3				6	3	2
52	10	7	5	7	6	6	2	102	102	102	10				6	3	2
53	8	6	3	5	13		2	152	152	152	15				5	2	2
54	9	7 7	5	7	2		3	33	33	33	3				6	3	2
55	12	8	3	7	13		3	53	53	53	5				7	4	6
56	12	8	3	7	13		4	4	4	4					7	6	5
57	10	6	1	5	13		5	4	4	10					6	6	5
58	11	7 3 6	1	5	6	9	2	152	27	62	12				6	6	6
59	13	9	3	8	6	6	5	103	104	10					5	3	4
60	10 10	6	3	5	6	11	6	4	146	33	18	6			6	3	6
61	9	7 10	2	10	6	6	4	104	104	10					5	6	5
62	9 10	6	3	6	3		4	42	173	10	6				6	6	5
63	9	5	2	5	6	6	3	2	52	12	6				6	6	5
64	10	7	1	18	6	6	3	103	3	5					5	6	5
65	7	5	1	10	4	10	3	2	102	15					6	4	
66	8	5	2	5			4	102	103	10					6	3	4
68	10 10	7 10	1	6	6	6	3	1011	76	2	13	6			6	3	3
69	8	6	3	5	13		3	103	103	10					3	9	3
70	11	6 10	2	10	6	13	4	2	103	5					6	6	2
71	7 10	5	2	4	16	6	3	53	53	5					3	3	3
72	10	6 15	2	15	6	8	6	3	102	153	2	6			6	3	3
73	8	6	2	10	5	10	3	2	102	15					6	6	3
74	9 10	8	3	6	16	6	3	3	3						6	3	3
75	10	8	3 ^a	7			4	2	153	7	6				6	3	6
76	7 10	5	2	5	4	18	6	4	3	3	10				6	3	

Places.

Places.	First			Second			Lads.			Ave- rage.			Dairy			Other			Ave- rage.			Women per week.					
	Men.			ditto.									Maid.			ditto.						Jan- vost.	Hay.		Win- ter.		
N ^o	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.
77	10	10	8				1	17	6	6	18	6	3	10	2	5	2	17	6				3	3			
78	8			5	10		2			5	3	4				3			3	10		6	3	3			
79	7	7	5				2			4	15	6	4			3	5	3	12	6		6	3	4		3	
80	9	10	7				3			6	10		3	5	3	5	3	5	9			4		3			
81	10			5	7	3	6			6	16		4	10	4	10	4	10	8			5		3	4		
82	11			5	8		2			6	7	3	4	15	4	15	4	15	6			5		3			
Aver.	10	8	6	6	11		3	2		5	5		3	19	3	5	3	9			6	3	4	4	3		
	8l.	9l.	9d.																								

Servants wages are higher than I conceived, 10 l. 8 s. 6 d. for upper farming men, is out of proportion to the average pay of labourers.

These tables of labour thus reduced to averages, remain too complex to form comparisons between the rates, and other circumstances. A parallel, to be completely plain, should consist in whole numbers. To discover, for instance, that in a place where bread is 2 d. a pound, day-labour is 8 s. a week; servants 5 l. 10 s. and women 3 s. 6 d. is so complex, that it conveys no clear idea: But I shall endeavour to reduce these multifarious rates to a single standard, not of truth, in each place, but of exact proportion between the one and the other.

I suppose a labourer to earn the average of the three seasons; his wife to work her harvest, and hay-time, as long as the husband; and to be employed six weeks every winter at the price of the neighbourhood; one of his sons to be a first man; another a second; and a third a lad in service: a daughter a dairy-maid; and another a common maid; all at the respective prices, but exclusive of the board of all servants. Now this is by no means a representation of real families, because probably but few are so disposed of; but it will unite in one view the earnings of all kinds; and shew, in a single sum, the total of each kind of labour, in a just proportion to the quantity of each. And for a comparison between labour and provisions, I shall, at the same time, give the average of all provisions; that is, bread, butter, cheese, and meat; but least such a medium should not be satisfactory to my readers (as the articles are not of equal importance to the poor) I shall, at the same time, add them distinctly, that use may be made of either, according to the judgments of different persons. In those places where the preceding tables are incomplete, I shall supply them *proportionably* to the parts that are

are given; but to obviate any objections,
I shall also give the labourers weekly
pay.

Places.	Bread.	But.	Ch.	Meat.	Av.	Total earnings.			Labour weekly.
						l.	s.	d.	
<i>Hatfield,</i>	2	7	4	$3\frac{3}{4}$	4	52	1	67	6
<i>Stevenage,</i>	2	7	$3\frac{1}{2}$	$3\frac{3}{4}$	4	52	15	7	4
<i>Offley,</i>	2	7	$3\frac{3}{4}$	$3\frac{3}{4}$	4	48	17	67	3
<i>Houghton,</i>	$1\frac{1}{2}$	7	4	$3\frac{3}{4}$	4	48	18	68	
<i>Milton,</i>	$1\frac{3}{4}$	7	4	$3\frac{1}{2}$	4	59	7	66	6
<i>Wanden,</i>	$1\frac{3}{4}$	7	4	$3\frac{1}{2}$	4	52	18	95	4
<i>Broughton,</i>	$1\frac{3}{4}$	6	4	$3\frac{3}{4}$	$3\frac{3}{4}$	52	0	06	5
<i>Biddenham,</i>	$1\frac{3}{4}$	6	4	4	$3\frac{3}{4}$	53	6	35	6
<i>Weston,</i>	$1\frac{3}{4}$	7	4	$3\frac{3}{4}$	4	44	4	97	5
<i>Catworth,</i>	2	6	4	$3\frac{1}{2}$	$3\frac{3}{4}$	53	11	65	10
<i>Aychurch,</i>	$1\frac{3}{4}$	6	4	$3\frac{1}{2}$	$3\frac{3}{4}$	44	16	06	1
<i>Casterton,</i>	$1\frac{1}{2}$	6	3	3	$3\frac{3}{4}$	50	0	07	2
<i>Paonton,</i>	$1\frac{1}{2}$	6	4	$3\frac{1}{4}$	$3\frac{3}{4}$	51	7	67	
<i>Fossen,</i>	$1\frac{1}{2}$	6	4	$3\frac{1}{4}$	$3\frac{1}{2}$	59	12	69	
<i>Cromwell,</i>	$1\frac{1}{4}$	6	4	$3\frac{1}{2}$	$3\frac{1}{2}$	58	8	99	4
<i>Drayton,</i>	$1\frac{1}{4}$	7	4	$2\frac{1}{4}$	$3\frac{3}{4}$	58	8	99	4
<i>Cantler,</i>	$1\frac{1}{4}$	7	4	3	$3\frac{1}{2}$	58	2	39	2
<i>Coneybrough,</i>	$1\frac{1}{2}$	6	4	3	$3\frac{1}{2}$	50	10	07	2
<i>Ecclesfield,</i>	$1\frac{1}{4}$	8	$3\frac{1}{2}$	$3\frac{1}{2}$	4	42	5	06	8
<i>Woolley,</i>	$1\frac{1}{4}$	6	4	$3\frac{1}{2}$	$3\frac{1}{2}$	51	4	05	3
<i>Kiddel,</i>	$1\frac{1}{4}$	$6\frac{1}{2}$	4	3	$3\frac{1}{2}$	59	7	66	6
<i>Wilbersfort,</i>	$1\frac{1}{4}$	$6\frac{1}{2}$	2	$3\frac{1}{2}$	$3\frac{1}{4}$	47	8	65	
G g 2						<i>Hatton,</i>			

Places	Bread.	But.	Ch.	Meat.	Av.	Total earnings.			Labour.	
						l.	s.	d.	weekly.	
<i>Hatton,</i> ^a	1 $\frac{1}{4}$	6 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	48	17	9	8	5
<i>Risby,</i>	1	5 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	3	63	10	9	8	5
<i>Stillingfleet,</i>	1	5 $\frac{1}{2}$	2	3 $\frac{1}{2}$	2 $\frac{1}{2}$	66	6		9	
<i>Howden,</i>	1	5 $\frac{1}{2}$	3	3 $\frac{1}{2}$	3	54	6	3	6	5
<i>Thorne,</i>	1	4	3	3 $\frac{1}{2}$	2 $\frac{1}{2}$	55	19	6	7	
<i>Wentworth,</i>	1	6	3 $\frac{1}{2}$	3	3 $\frac{1}{2}$	48	3	3	6	10
<i>Driffild,</i>	$\frac{1}{4}$	6	2	3	2 $\frac{3}{4}$	55	2	6	7	7
<i>Teddingham,</i> ^b	$\frac{1}{4}$	5 $\frac{1}{2}$	2	3 $\frac{1}{2}$	2 $\frac{1}{2}$				9	9
<i>Newton,</i>	$\frac{1}{4}$	5 $\frac{1}{2}$	2	3 $\frac{1}{2}$	2 $\frac{1}{2}$	55	4	3	9	3
<i>Nunnington,</i>	$\frac{1}{4}$	4 $\frac{1}{2}$	2	3 $\frac{1}{2}$	2 $\frac{1}{2}$	52	5	6	7	7
<i>Kirby,</i>	1 $\frac{1}{4}$	7 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	44	18	6	7	3
<i>Kirkcaldham,</i>	1 $\frac{1}{4}$	6 $\frac{1}{2}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	3	53	17	6	5	11
<i>Schorton,</i>	1 $\frac{1}{4}$	6 $\frac{1}{2}$	2	3	3	52	18	3	6	3
<i>Gilling,</i>	1 $\frac{1}{2}$	7 $\frac{1}{2}$	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	49	5	6	6	3
<i>Raakby,</i>	1 $\frac{1}{2}$	6	2 $\frac{3}{4}$	3	3 $\frac{1}{2}$	59	12	6	9	3
<i>Fremington,</i>	1	5 $\frac{1}{2}$	2 $\frac{1}{2}$	3	3	44	3		6	1
<i>Kiplin,</i>	1 $\frac{1}{4}$	5 $\frac{1}{2}$	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	54	1	3	6	1
<i>Swinton,</i>	1	5 $\frac{1}{2}$	2	3	2 $\frac{1}{2}$	53	5		7	6
<i>Craikbill,</i>	1	5 $\frac{1}{2}$	1 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{1}{2}$	47	18	6	5	1

^a Thus far the labour, excepting the labourers' weekly pay, is all supplied by the proportion of other places. In *Risby* only that of common maids and womens' weekly pay, and in the three following places, only the latter: After which all is from the minutes, nothing being supplied.

^b The prices of provisions here taken from its neighbour *Newton*.

^c Earnings of women not minuted; but taken from the preceding place.

Sloningsford,

Place.	Bread.	But.	Ch.	Meat.	Av.	Total earnings.		Labour.	
						l.	s.	d.	weekly.
<i>Slensingford,</i>	1	5	2	3	2 $\frac{3}{4}$	50	19	5	2
<i>Danby,</i>	1	6 $\frac{1}{4}$	2	3 $\frac{1}{2}$	3	52	16	3	5 4
<i>Asgarth,</i>	1	5 $\frac{1}{2}$	2	3 $\frac{1}{4}$	2 $\frac{3}{4}$	50	5	6	7 1
<i>Raby,</i>	1	6 $\frac{1}{2}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{4}$	59	7	6	6 6
<i>Gosworth,*</i>	$\frac{3}{4}$	7	1 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	52	7	6	7
<i>Morpeth,</i>	$\frac{3}{4}$	8	2	3 $\frac{1}{4}$	3 $\frac{1}{2}$	45	3	9	6
<i>Alnwick,</i>	$\frac{3}{4}$	6	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	43	10	5	8
<i>Belford,</i>	$\frac{3}{4}$	5 $\frac{1}{4}$	3	2 $\frac{1}{2}$	2 $\frac{3}{4}$	44	1	5	2
<i>Hetton,</i>	$\frac{3}{4}$	5	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	43	4	5	1
<i>Fenton,</i>	$\frac{3}{4}$	5	2 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	42	3	6	7
<i>Rothbury,</i>	$\frac{3}{4}$	5	2 $\frac{1}{2}$	3	2 $\frac{3}{4}$	50	15	6	9
<i>Cambo,</i>	$\frac{3}{4}$	4 $\frac{3}{4}$	2	3	2 $\frac{1}{2}$	58	3	6	8 9
<i>Glenwelt,</i>	$\frac{3}{4}$	6	2	2 $\frac{1}{2}$	2 $\frac{3}{4}$	49	1	6	7 1
<i>Ascot,</i>	$\frac{3}{4}$	6	2	2 $\frac{3}{4}$	2 $\frac{3}{4}$	49	8	6	8 2
<i>Penrith,</i>	$\frac{3}{4}$	5 $\frac{1}{4}$	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	53	11	3	6 2
<i>Keswick,</i>	$\frac{3}{4}$	5 $\frac{3}{4}$	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$	49	15	9	6 10
<i>Shapp,</i>	$\frac{3}{4}$	6	2 $\frac{1}{2}$	2 $\frac{1}{4}$	3	50	14	6	7 7
<i>Holme,</i>	$\frac{3}{4}$	5 $\frac{1}{2}$	3	2 $\frac{1}{2}$	2 $\frac{1}{4}$	49	17	6	7 7
<i>Kabers,</i>	$\frac{3}{4}$	8	3	3	3 $\frac{1}{2}$	45	11	6	7 7
<i>Garflang,</i>	$\frac{3}{4}$	7	3	3	3 $\frac{1}{4}$	49	2	6	7 6
<i>Altringham,</i>	1	6	3 $\frac{1}{2}$	3	3 $\frac{1}{4}$	38	15	3	5 4
<i>Ormskirk,</i>	$\frac{3}{4}$	7	3	3	3 $\frac{1}{4}$	34	9	4	11
<i>Holmes- Chapel,</i>	}	1	6	3 $\frac{1}{2}$	3 $\frac{1}{2}$	48	13	9	8 5

* The same as at Newcastle.

G g 3

Shen-

Places.	Bread.	But.	Ch.	Meat.	Av.	Total earnings.		Labour
						l.	s.	d. weekly.
<i>Shenstone,</i>	1	7	2½	2½	3¼	45	6	5 8
<i>Aston,</i>	1	8	2½	2½	3½	51	5	6 8 7
<i>Hagley,</i>	1½	6	4	3	3½	48	3	6 7 5
<i>Broomsgrrove,</i>	1½	6½	3½	3¼	3½	44	9	6 7
<i>Pershore,</i>	1¼	7	3	3	3½	47	18	6 7
<i>Bendsworth,</i>	1½	8	3½	3	4	49	2	7 3
<i>Moreton,</i>	1½	7	3½	3½	3¾	42	17	7
<i>Benington,</i>	1¼	6	4	3¼	3½	45	11	6 7 1
<i>Henley,</i>	1	7	4	3½	3¾	44	1	9 7 5
<i>Maidenhead,</i>	1¼	7	4½	3¼	4	44	15	3 7 6
<i>Harmsworth,</i>	1½	7	4	3¼	4	48	6	6 7 3
<i>Kensington,</i>	1¼	8	4½	3¼	4¼	58	5	9 4
<i>Mims,</i>	1½	8	4¼	4	4¼	55	2	7 9

This table gives a general view of the proportion between labour and provisions ; but that you may see the effect attended by a gradation of price, I shall, in the next place, insert a table divided according to all the various prices ; which will shew, at once, the connection, if any, between the rates of provisions and labour.

2 $\frac{1}{2}$ d. the aggregate price.

Places.	Bread.	Butt.	Ch.	Meat.	Av.	Total earnings.			Labour
						l.	s.	d.	weekly.
Nunnington,	$\frac{3}{4}$	4 $\frac{1}{2}$	2	3 $\frac{1}{4}$	2 $\frac{1}{2}$	52	5	67	7
Hetton,	$\frac{3}{4}$	5	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	43	4	05	1
Cambo,	$\frac{3}{4}$	4 $\frac{3}{4}$	2	3	2 $\frac{1}{2}$	58	3	68	9
Penrith,	$\frac{3}{4}$	5 $\frac{1}{4}$	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	53	11	36	2
Keswick,	$\frac{3}{4}$	5 $\frac{1}{4}$	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$	49	15	96	10
Averages,	$\frac{3}{4}$	5	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	51	8	06	8 $\frac{1}{2}$

2 $\frac{3}{4}$ d. the aggregate price.

Stillingfleet,	1	5 $\frac{1}{4}$	2	3 $\frac{1}{2}$	2 $\frac{3}{4}$	66	6	09	0
Tborne,	1	4	3	3 $\frac{1}{2}$	2 $\frac{3}{4}$	55	19	67	0
Driffeld,	$\frac{3}{4}$	6	2	3	2 $\frac{3}{4}$	55	2	67	7
Yeddingham,	$\frac{3}{4}$	5 $\frac{1}{2}$	2	3 $\frac{1}{4}$	2 $\frac{1}{4}$			9	9
Newton,	$\frac{3}{4}$	5 $\frac{1}{2}$	2	3 $\frac{1}{4}$	2 $\frac{3}{4}$	55	4	39	3
Kiplin,	1 $\frac{1}{4}$	3 $\frac{3}{4}$	2	2 $\frac{3}{4}$	2 $\frac{3}{4}$	54	1	36	0
Swinton,	1	5 $\frac{1}{4}$	2	3	2 $\frac{3}{4}$	53	5	07	6
Craikbill,	1	5 $\frac{1}{4}$	1 $\frac{3}{4}$	3 $\frac{1}{4}$	2 $\frac{3}{4}$	47	18	65	1
Slenningsford,	1	5	2	3	2 $\frac{3}{4}$	50	19	05	2
Asgarth,	1	5 $\frac{1}{2}$	2	3 $\frac{1}{4}$	2 $\frac{3}{4}$	50	5	67	1
Gosworth,	$\frac{3}{4}$	7	1 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	52	7	67	0
Alnwick,	$\frac{3}{4}$	6	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	43	10	05	8
Belford,	$\frac{3}{4}$	5 $\frac{1}{4}$	3	2 $\frac{1}{2}$	2 $\frac{3}{4}$	44	1	05	2
Fenton,	$\frac{3}{4}$	5	2 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	42	3	06	7

G g 4

Rothbury,

Places.	Bread.	Butt.	Ch.	Meat.	Av.	Total earnings.			Labour weekly.	
						l.	s.	d.		
<i>Rothbury,</i>	$\frac{1}{4}$	5	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{4}$	50	15	0	6	9
<i>Glenwelt,</i>	$\frac{1}{4}$	6	$2\frac{1}{2}$	$2\frac{1}{4}$	$2\frac{1}{4}$	49	1	6	7	1
<i>Afcof,</i>	$\frac{1}{4}$	6	2	$2\frac{1}{2}$	$2\frac{1}{4}$	49	8	6	8	2
<i>Holme,</i>	$\frac{1}{4}$	$5\frac{1}{2}$	3	$2\frac{1}{2}$	$2\frac{1}{4}$	49	17	6	7	7
Averages,	$\frac{1}{4}$	$5\frac{1}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{4}$	51	3	10	7	0

3 d. the aggregate price.

<i>Risby,</i>	I	5 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	3	63	10	98	5
<i>Howden,</i>	I	5 $\frac{1}{4}$	3	3 $\frac{1}{2}$	3	54	6	36	5
<i>Kirkleatham,</i>	I $\frac{1}{4}$	6 $\frac{1}{4}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	3	53	17	65	11
<i>Schorton,</i>	I $\frac{1}{4}$	6 $\frac{1}{2}$	2	3	3	52	18	36	3
<i>Fremington,</i>	I	5 $\frac{3}{4}$	2 $\frac{1}{4}$	3	3	44	3	06	I
<i>Danby,</i>	I	6 $\frac{1}{4}$	2	3 $\frac{1}{2}$	3	52	16	35	4
<i>Shapp,</i>	$\frac{1}{4}$	6	2 $\frac{1}{2}$	2 $\frac{3}{4}$	3	50	14	67	7
Averages,	I	5 $\frac{3}{4}$	2 $\frac{1}{4}$	3 $\frac{1}{4}$	3	53	2	46	6 $\frac{1}{4}$

$3\frac{1}{4}d.$ the aggregate price.

<i>Wilbersfort,</i>	1 $\frac{1}{4}$	6 $\frac{1}{2}$	2	3 $\frac{1}{2}$	3 $\frac{1}{4}$	47	8	65	0
<i>Hatton,</i>	1 $\frac{1}{4}$	6 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{4}$	48	17	98	5
<i>Wentworth,</i>	1	6	3 $\frac{1}{2}$	3	3 $\frac{1}{4}$	48	3	36	10
<i>Rookby,</i>	1 $\frac{1}{2}$	6	2 $\frac{3}{4}$	3	3 $\frac{1}{4}$	59	12	69	0
<i>Raby,</i>	1	6 $\frac{1}{2}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{4}$	59	7	66	6
<i>Garstang,</i>	$\frac{3}{4}$	7	3	3	3 $\frac{1}{4}$	49	2	67	6

Alitings-

Places,	Bread.	Butt.	Ch	Meat.	Av.	Total earnings.			Labour,
						l.	s.	d.	weekly.
Altringham,	1	6	3½	3	3¼	38	15	3	5 4
Ormskirk,	½	7	3	3	3¼	34	9	0	4 11
Shenstone,	1	7	2½	2½	3¼	45	6	0	5 8
Averages,	1	6½	2½	3	3¼	47	16	0	6 5½

3½ d. the aggregate price.

Paulton,	1½	6	4	3½	3½	51	7	6	7 0
Fosfen,	1½	6	4	3½	3½	59	12	6	9 0
Cromwel,	1½	6	4	3½	3½	58	8	9	9 4
Coneybro',	1½	6	4	3	3½	50	10	0	7 2
Woolley,	1¼	6	4	3½	3½	51	4	0	5 3
Kiddel,	1¼	6½	4	3	3½	59	7	6	6 6
Kirby,	1¼	7½	2½	3½	3½	44	18	6	7 3
Gilling,	1½	7½	2½	3	3½	49	5	6	6 3
Morpeth,	¾	8	2	3½	3½	45	3	9	6 0
Kabers,	¾	8	3	3	3½	45	11	6	7 7
Holmes- Chapel,	1	6	3½	3½	3½	48	13	9	8 5
Aston,	1	8	2½	2½	3½	51	5	6	8 7
Hagley,	1½	6	4	3	3½	48	3	6	7 5
Broomsgrove,	1½	6½	3½	3½	3½	44	9	6	7 0
Persbore,	1¼	7	3	3½	3½	47	18	6	7 0
Renfington,	1¼	6	4	3½	3½	45	11	6	7 1
Averages,	1¼	6½	3¼	3	3½	50	11	7	3 3½ d.

3 $\frac{3}{4}$ d. the aggregate price.

Places.	Bread.	Butt.	Ch.	Meat.	Ave.	Total earnings.			Labour weekly.
						l.	s.	d.	
Broughton,	1 $\frac{3}{4}$	6	4	3 $\frac{1}{2}$	3 $\frac{3}{4}$	52	0	0	6 5
Biddenham,	1 $\frac{3}{4}$	6	4	4	3	53	6	3	5 6
Catworth,	2	6	4	3 $\frac{1}{2}$	3 $\frac{3}{4}$	53	11	6	5 10
Aychurch,	1 $\frac{3}{4}$	6	4	3 $\frac{1}{2}$	3 $\frac{3}{4}$	44	16	0	6 1
Drayton,	1 $\frac{3}{4}$	7	4	2 $\frac{3}{4}$	3	58	8	9	9 4
Cantler,	1 $\frac{1}{2}$	7	4	3	3 $\frac{3}{4}$	58	2	3	9 2
Moreton,	1 $\frac{1}{2}$	7	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	42	17	0	7 0
Henley,	1	7	4	3 $\frac{1}{2}$	3	44	1	9	7 5
Averages,	1 $\frac{1}{2}$	6 $\frac{1}{2}$	3 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{3}{4}$	50	17	11	7 1

4 d. the aggregate price.

Hatfield,	2	7	4	3 $\frac{3}{4}$	4	52	1	6	7 6
Stevenage,	2	7	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4	52	15	0	7 4
Offley,	2	7	3 $\frac{3}{4}$	3 $\frac{3}{4}$	4	48	17	6	7 3
Houghton,	1 $\frac{1}{2}$	7	4	3 $\frac{3}{4}$	4	48	18	6	8 0
Milton,	1 $\frac{1}{4}$	7	4	3 $\frac{1}{2}$	4	59	7	6	6 6
Wanden,	1 $\frac{3}{4}$	7	4	3 $\frac{1}{2}$	4	52	18	9	6 4
Weston,	1 $\frac{3}{4}$	7	4	3 $\frac{3}{4}$	4	44	4	9	7 5
Ecclesfield,	1 $\frac{1}{4}$	8	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4	12	5	0	6 8
Bendsworth,	1 $\frac{1}{2}$	8	3 $\frac{1}{2}$	3	4	49	2	0	7 3
Maidenhead,	1 $\frac{1}{4}$	7	4 $\frac{1}{2}$	3 $\frac{3}{4}$	4	44	15	3	7 6
Harmsworth,	1 $\frac{1}{2}$	7	4	3 $\frac{3}{4}$	4	48	6	6	7 3
Kensington,	1 $\frac{1}{4}$	8	4 $\frac{1}{2}$	3 $\frac{1}{4}$	4 $\frac{1}{4}$	58	5	0	9 4
Mims,	1 $\frac{1}{2}$	8	4 $\frac{1}{4}$	4	4 $\frac{1}{4}$	55	2	0	7 9
Averages,	1 $\frac{1}{2}$	7 $\frac{1}{4}$	4	3 $\frac{1}{2}$	4	50	10	8	7 4

	£.	s.	d.
Aggregate price of 3d.	53	2	4
Ditto of 2d. $\frac{1}{2}$, - - -	51	8	0
Ditto of 2d. $\frac{1}{4}$, - - -	51	3	10
Ditto of 3d. $\frac{1}{4}$, - - -	50	17	11
Ditto of 4d. - - -	50	10	8
Ditto of 3d. $\frac{1}{2}$, - - -	50	1	11
Ditto of 3d. $\frac{1}{4}$, - - -	47	16	0

Bread alone taken, the averages are as follow;

$\frac{1}{4}$ d. per lb. - - -	47	5	10
1 d. - - -	51	9	6
1 d. $\frac{1}{4}$, - - -	51	17	11
1 d. $\frac{1}{2}$, - - -	50	12	3
1 d. $\frac{3}{4}$, - - -	50	12	11
2 d. - - -	51	16	4

These tables prove, that the dependence of the price of labour on that of provisions, is extremely uncertain, if any thing at all; and in numerous instances the former seems palpably in contradiction to the latter. The labouring poor, who pay the aggregate price of 4d. per lb. for provisions, earn 3*l.* a year less than others who are supplied at 3d. per lb. Those who feed at 3d. $\frac{1}{4}$, earn less by near 6*l.* than others at 3d. A monstrous disproportion! And these, besides the general contradictions of four inferior prices being superior in earnings to

to 4*d.* and besides many others of the same kind, 2*d.* $\frac{1}{2}$, the *lowest* price of provisions, is attended with 18*s.* a year greater earnings than 4*d.* the *highest* price. In bread the same contradictions are found: The man who pays 1*d.* a pound, earns as much, within a few shillings, as he who pays 2*d.* And he who eats it at 1*d.* $\frac{1}{2}$, more. Whatever kinds of provision are taken, the same contradictions will appear. In no state of the case will there be found any the least reason for supposing that the price of provisions determines that of labour.

No person can be so hardy as to assert, that provisions cannot be too high relative to labour; but what would the poor of a country, that pays the average price of 2*d.* $\frac{1}{2}$ for bread, butter, cheese, and meat, say, if the price was raised to 4*d.*? They would complain; riot; burn down all the mills; and hang up all the bakers around. But might they not be told, that they earned *more* than other counties that already paid 4*d.*?

The rates of labour admit of prodigious variations that are totally unaccountable. I apprehend that chance has been the mother of three fourths: Famine, before the exportation of corn was encouraged, and extreme high prices, locally heightened the

the prices of labour, as the richer inhabitants were more or less willing to assist the poor: The rates so raised, in some places continued after the occasion; in others were reduced: Hence undoubtedly arose a part of those variations which we are so much puzzled to account for; and such accidents could scarcely fail of throwing a great variety over the whole kingdom.

In one respect the result of these tables is particularly useful: They prove, that most of the complaints arising from what have been called the high prices of provisions, are fallacious, and ought never to be considered as marks, that the labouring poor of the kingdom is oppressed by them. The *labouring poor* is a term that none but the most superficial of reasoners can use; it is a term that means nothing. When it is asserted so and so of the labouring poor, which are to be understood; those that are fed at 2 d. 3 d. or 4 d. per average pound? It is impossible that the same facts and reasoning should be applicable to all; and yet these distinctions have never been made by any of those numerous writers that have published so much on the subject. The labouring poor fed at 2 d. $\frac{1}{2}$ per lb. earn more than those who eat at 4 d. Suppose wheat at 50 s. a quarter; it is immediately clamoured that the poor
— are

are starved. But, in the name of wonder, are the former starved? Whatever oppression the latter may feel, it is impossible the others can be in the same predicament; and as the higher prices (4*d.* and 3*d.* $\frac{1}{2}$, for instance) are found, in tracks of country not a tenth so extensive as the lower ones; may we not conclude, that whenever very high prices oppress, it is *the few*, not *the many*: And consequently, that the application of a remedy, supposing any part of the evil real, ought never to be *general*, but *particular*. A measure may be of utility to a tenth part of the kingdom, that is extremely prejudicial to all the rest of it; and when private interest spreads the clamour of that tenth throughout the whole, public measures take place, of most fatal tendency, in sacrificing the real interests of nine tenths of the kingdom, in favour of the small remainder. Nor should it ever be forgotten, that the proportion of the kingdom which consumes its provisions at a comparatively high price, is trifling to those parts that are fed at very low ones.

* * * * *

THE size of farms having been often represented as one cause of provisions and labour rising; and to be attended with various

rious effects respecting both; it is necessary to examine the idea, by here throwing into one view the size of farms, the aggregate of the prices of provisions, and the total earnings in labour; and I shall also add the weekly pay *per man*. The method that will present the clearest view, is to average the farms in classes, according to their size.

Farms to 50 l. a year.

Places.	Average size of Farms in rent.	Aggreg. Price of Pro- visions.	Weekly Pay.	Total Earnings.		
				<i>l.</i>	<i>s.</i>	<i>d.</i>
<i>Ayeburch,</i>	40	$3\frac{3}{4}$	6 1	44	16	0
<i>Fossen,</i>	28	$3\frac{1}{2}$	9 0	59	12	6
<i>Ecclesfield,</i>	50	4	6 8	42	5	0
<i>Wilbersfort,</i>	40	$3\frac{1}{4}$	5 0	47	8	6
<i>Wentworth,</i>	40	$3\frac{1}{4}$	6 10	48	3	3
<i>Fremington,</i>	32	3	6 1	44	3	0
<i>Swinton,</i>	22	$2\frac{3}{4}$	7 6	53	5	0
<i>Asgarth,</i>	25	$2\frac{3}{4}$	7 1	50	5	6
<i>Glenwelt,</i>	30	$2\frac{3}{4}$	7 1	49	1	6
<i>Keswick,</i>	45	$2\frac{1}{2}$	6 10	49	15	9
<i>Holme,</i>	50	$2\frac{3}{4}$	7 7	49	17	6
<i>Kabers,</i>	40	$3\frac{1}{2}$	7 7	45	11	6
<i>Ormskirk,</i>	40	$3\frac{1}{4}$	4 11	34	9	0
Averages,	37	3	6 9	47	11	10

Farms

Farms from 50 to 100 l.

Places.	Average size of Farms in rent.	Aggreg. Price of Pro- visions.	Weekly Pay.	Total Earnings.		
				l.	s.	d.
Hatfield,	100	4	7 6	52	1	6
Offley,	100	4	7 3	48	17	6
Milton,	75	4	6 6	59	7	6
Drayton,	70	3 $\frac{1}{2}$	9 4	58	8	9
Kiddel,	88	3 $\frac{1}{2}$	6 6	59	7	6
Whinmoor,						
Risby,	75	3	8 5	63	10	9
Thorne,	75	2 $\frac{1}{2}$	7 0	55	19	6
Driffild,	75	2 $\frac{1}{4}$	7 7	55	2	6
Newton,	70	2 $\frac{1}{4}$	9 3	55	4	3
Nunnington,	60	2 $\frac{1}{2}$	7 7	52	5	6
Kirkleatham,	100	3	5 11	53	17	6
Schorton,	65	3	6 3	52	18	3
Rookby,	95	3 $\frac{1}{4}$	9 0	59	12	6
Rothbury,	100	2 $\frac{1}{4}$	6 9	50	15	6
Cambo,	65	2 $\frac{1}{2}$	8 9	58	3	6
Ascot,	55	2 $\frac{1}{4}$	8 2	49	8	6
Garstang,	95	3 $\frac{1}{4}$	7 6	49	2	6
Henley,	70	3 $\frac{1}{2}$	7 5	44	1	9
Mims,	100	4 $\frac{1}{4}$	7 9	55	2	0
Averages,	80	3	7 8	54	7	9

Farms

Farms from 100 to 200 l.

Places.	Average size of Farms in Rent.	Aggreg. Price of Pro- visions.	Weekly Pay.	Total Earnings.		
				l.	s.	d.
Wooburn,	175	4	8 0	48	18	6
Wanden,	115	4	6 4	58	18	9
Broughton,	150	3 $\frac{1}{4}$	6 5	52	0	0
Weston,	120	4	7 5	44	4	9
Catworth,	115	3 $\frac{1}{4}$	5 10	53	11	6
Woolley,	110	3 $\frac{1}{2}$	5 3	51	4	0
Stillingfleet,	105	2 $\frac{3}{4}$	9 0	66	6	0
Teddingham,	155	2 $\frac{3}{4}$	9 9	-	-	-
Kiplin,	110	2 $\frac{3}{4}$	6 0	54	1	3
Penrith,	115	2 $\frac{1}{2}$	6 2	53	11	3
Altringham,	160	3 $\frac{1}{4}$	5 4	38	15	3
Knotsford,	150	3 $\frac{1}{2}$	6 9	-	-	-
Holmes- Chapel, }	160	3 $\frac{1}{2}$	8 5	48	13	9
Aston,	110	3 $\frac{1}{2}$	8 7	51	5	6
Hagley,	125	3 $\frac{1}{2}$	7 5	48	3	6
Broomsgrove,	120	3 $\frac{1}{2}$	7 0	44	9	6
Persbore,	105	3 $\frac{1}{2}$	7 0	47	18	6
Harmsworth,	120	4	7 3	48	6	6
Averages,	129	3 $\frac{1}{4}$	7 1 $\frac{1}{4}$	50	5	6

Farms from 200 to 300 l.

Places.	Average size of Farms in Rent.	Aggreg. Price of Pro- visions.	Weekly Pay.	Total Earnings.		
				l.	s.	d.
Stevenage,	300	4	7 4	52	15	0
Casterton,	260	$3\frac{1}{4}$	7 2	50	0	0
Gosworth,	225	$2\frac{3}{4}$	7 0	52	7	0
Morpeth,	265	$3\frac{1}{2}$	6 0	45	3	9
Belford,	300	$2\frac{3}{4}$	5 2	44	1	0
Hetton,	250	$2\frac{1}{2}$	5 1	43	4	0
Shapp,	220	3	7 7	50	14	6
Shenstone,	210	$3\frac{1}{4}$	5 8	45	6	0
Moreton,	275	$3\frac{3}{4}$	7 0	42	17	0
Benington,	220	$3\frac{1}{2}$	7 1	45	11	6
Maidenhead,	275	4	7 6	44	15	3
Averages,	254	$3\frac{1}{4}$	6 7	46	19	6

Farms above 300 l.

Fenton,	500	$2\frac{3}{4}$	6 7	42	3	0
Bendsworth,	520	4	7 3	49	2	0
Averages,	510	$3\frac{1}{4}$	6 11	45	12	6

PROVI-

PROVISIONS.

Above 500 <i>l.</i> a year,	-	-	3 <i>d.</i> $\frac{1}{4}$
From 200 to 300,	-	-	3 <i>d.</i> $\frac{1}{4}$
From 100 to 200,	-	-	3 <i>d.</i> $\frac{1}{4}$
From 50 to 100,	-	-	3 <i>d.</i>
To 50 <i>l.</i>	-	-	3 <i>d.</i>

From hence we may conclude, that the size of farms has no influence on the price of provisions. The farthing *per lb.* under 100 *l.* a year is too inconsiderable a variation to be considered the least, unless it had continued in a gradation; but, on the contrary, from 100 *l.* to 500 *l.* a year are exactly equal; which they could not possibly be, if that farthing *per lb.* was occasioned by the smallness of those farms.

LABOUR.

	<i>Per week.</i>
Farms from 50 to 100 <i>l.</i>	7 <i>s.</i> 8 <i>d.</i>
— from 100 to 200 <i>l.</i>	7 1 $\frac{1}{4}$
— of 500 <i>l.</i> - - -	6 11
— to 50 <i>l.</i> - - -	6 9
— from 200 to 300 <i>l.</i>	6 7

	<i>Total Earnings.</i>
From 50 to 100 <i>l.</i> - <i>£.</i>	54 7 9
From 100 to 200 <i>l.</i> -	50 5 6
To 50 <i>l.</i> - - -	47 11 10
From 200 to 300 <i>l.</i> -	46 19 6
Of 500 <i>l.</i> - - -	45 12 6

The first of these tables is much broken in regularity; but yet it gives some reason to conclude, that if the size of farms has any effect on the price of labour, it is that small ones rather heighten it; and this is somewhat confirmed by the latter: From 50 to 100 *l.* in both is the highest in the scale; and the very large ones in both have the cheapest labour. This will farther appear, by dividing the tables thus:

				<i>Per week.</i>
To 200 <i>l.</i>	-	-	-	7 s. 2 d.
Above 200 <i>l.</i>	-	-	-	6 9

				<i>Total Earnings.</i>
To 200 <i>l.</i>	-	-	-	£. 50 15 0
Above 200 <i>l.</i>	-	-	-	46 6 0

I do not offer these tables as absolutely decisive; even their not being so has its use; it ought to stop that torrent of general notions and vulgarisms, that large farms are the occasion of every evil under heaven. However, this state of the comparison shews, that if the price of labour is affected by the size of farms, it is the small ones that raise it.

The ideas most common on this subject, will, from hence, condemn small farms. But I must so far be their friend as to assert, that the propriety of the conclusion is not clear. I by no means venture

ture to assert, that raising the price of labour is a peculiar benefit attending them ; but there is much reason to conclude, that this effect is not the most prejudicial.

From this enquiry we at least gain two points of knowledge, that are of consequence. Large farms do not raise the prices either of provisions or labour. This is perfectly consistent with reason ; but the contrary has, like many other circumstances, been taken for granted, in at least forty publications.

In some places I was informed of the value of servants' board, washing, and lodging ; the following is a review of that part of my intelligence.

<i>Danby,</i>	-	-	-	£. 8	13	4
<i>Ormskirk,</i>	-	-	-	9	0	0
<i>Altringham,</i>	-	-	-	8	13	4
<i>Knotsford,</i>	-	-	-	10	8	0
<i>Stone,</i>	-	-	-	6	10	0
<i>Shenstone,</i>	-	-	-	9	0	0
<i>Hagley,</i>	-	-	-	10	0	0
<i>Brooms Grove,</i>	-	-	-	6	0	0
<i>Bendsworth,</i>	-	-	-	12	0	0
<i>Benington,</i>	-	-	-	10	0	0
<i>Average,</i>	-	-	-	9	0	0

* * * * *

Lastly, before I quit this subject of labour and provisions, I shall draw into one view the prices of labour in the manufacturing towns through which I passed; and give you the general average of their earnings, together with the aggregate price of provisions.

Places.	Manufactures.	Labour.	s.	d.	Prov.
Bedford,	Lace,	{ Women,	4	6	
		{ Girls,	4	0	
Rotherham,	{ Iron,	{ Men,	10	0	3½
	{ Potteries,	{ Boys,	3	0	
Sheffield,	{ Plating,	{ Men,	13	6	
	{ Cutlery,	{ Women,	4	0	
	{ &c. &c.	{ Girls,	3	0	
Wakefield,	Cloths,	{ Men,	10	0	3½
		{ Boys,	1	9	
		Colliers,	11		
Leeds,	Ditto,	{ Men,	8	3	3¾
		{ Women,	3	6	
		{ Boys,	5	0	
		{ Girls,	1	8	
Ayton,	Allom,	Men,	7	6	
Fremington,	Lead mines,	{ Men,	7	6	3
		{ Women,	6	0	
		{ Boys &	3	3	
		{ Girls,	3	3	
		Darlington,			

<i>Places.</i>	<i>Manufactures.</i>	<i>Labour.</i>	<i>Prov.</i>
<i>Darlington,</i>	Huckabacks,	Men, ^{s.} 8 ^{d.} 6	— 3½
<i>Newcastle,</i>	Colliers,	Men, 15 0	— 2¼
<i>Carlisle,</i>	{ Cottons, Checks,	{ Men, 9 0	— 2¾
<i>Kendal,</i>	{ Stockings, Cottons, Linsey-woolsey, Tannery,	{ Men, 9 5 Women, 3 3 Children, 2 0	
<i>Warrington,</i>	{ Sailcloth, Sacking, Pins, Shoes,	{ Men, 8 7 Women, 4 6 Childr. 2 6	3¼
<i>Liverpool,</i>	{ Porcelane, Stockings, Glaſs,	{ Men, 8 11	— 3½
<i>Manchester,</i>	{ Fustians, Check, Hats, Small-wares,	{ Men, 7 1 Women, 5 4 Childr. 3 5	3½*
<i>Burslem,</i>	Potteries,	{ Men, 9 6 Women, 6 6	3†
<i>Newcastle,</i>	{ Shoes, Hats,	{ Men, 8 6 Women, 4 6 Child. 1 0	3

* Not minuted, but *Altringham* is 3 d. ½, and *Liverpool* the same.

† As *Newcastle*.

Places.	Manufactures.	Labour.	s.	d.
Worcester,	{ Porcelane, Gloves,	{ Men,	9	0
		{ Women,	4	6
		{ Childr.	2	3
Average of men, - - -			9	6
———— of women, - - -			4	7
———— of children, - - -			2	8

A very transient view of the table will shew, that the price of provisions does not influence that of manufacturing labour.

LET-

LETTER XL.

THE poor-rates throughout this tour, were an object which I seldom failed to make enquiries concerning; and as they are supposed to be particularly connected with the subjects of my two preceding letters, I shall here draw into one view, all the intelligence I gained concerning them: To render the tables the more satisfactory, I shall add the aggregate price of provisions, and the aggregate of earnings, in each place.

Places.	Poor-rates per s. d.		Price Prov. d.	Weekly pay. s. d.		Total earnings. l. s. d.		
Sheffield,	4	0						
Risby,	0	6	3	8	5	63	10	9
Stillington,	0	6	2 $\frac{3}{4}$	9	0	66	6	0
Driffield,	0	9	2 $\frac{3}{4}$	7	7	55	2	6
Newton,	0	2	2 $\frac{3}{4}$	9	3	55	4	3
Kirkleatham,	1	3	3	5	11	53	17	6
Gilsdale,	1	0						
Schorton,	0	8	3	6	3	52	18	3
Gilling,	0	8	3 $\frac{1}{2}$	6	3	49	5	6
Rookby,	0	8	3 $\frac{1}{4}$	9	0	59	12	6

Place.	Poor-rates per £.		Price of Prov. d.	Weekly pay.		Total earnings.		
	s.	d.		s.	d.	l.	s.	d.
Fremington,	1	3	3	6	1	44	3	0
Kiplin,	1	0	2 $\frac{3}{4}$	6	0	54	1	3
Swinton, &c.	0	6	2 $\frac{3}{4}$	7	6	53	5	0
Craikhill,	0	6	2 $\frac{3}{4}$	5	1	47	18	6
Slensingford,	1	0	2 $\frac{3}{4}$	5	2	50	19	0
Asgarth,	0	6	2 $\frac{3}{4}$	7	1	50	5	6
Raby,	0	6	3 $\frac{1}{4}$	6	6	59	7	6
Gosworth,	0	2	2 $\frac{3}{4}$	7	0	52	7	6
Morpeth,	0	6	3 $\frac{1}{2}$	6	0	45	3	9
Alnwick,	0	6	2 $\frac{3}{4}$	5	8	43	10	0
Belford,	0	7 $\frac{1}{2}$	2 $\frac{3}{4}$	5	2	44	1	0
Hetton,	0	6	2 $\frac{1}{2}$	5	1	43	4	0
Fenton,	0	0 $\frac{1}{4}$	2 $\frac{3}{4}$	6	7	42	3	0
Rothbury,	1	5	2 $\frac{3}{4}$	6	9	50	15	0
Cambo,	0	6	2 $\frac{1}{2}$	8	9	58	3	6
Glenwelt,	1	6	2 $\frac{3}{4}$	7	1	49	1	6
Ascot,	0	6	2 $\frac{3}{4}$	8	2	49	8	6
Penrith,	1	3	2 $\frac{1}{2}$	6	2	53	11	3
Keswick,	0	9	2 $\frac{1}{2}$	6	10	49	15	9
Skapp,	0	9	3	7	7	50	14	6
Holme,	0	3	2 $\frac{3}{4}$	7	7	49	17	6
Kabers,	0	3	3 $\frac{1}{2}$	7	7	45	11	6
Garflang,	0	5	3 $\frac{1}{4}$	7	6	49	2	6
Liverpool,	1	0	3 $\frac{1}{2}$					
Ormskirk,	0	6	3 $\frac{1}{4}$	4	11	34	9	0

Altring-

Places.	Poor-rates per £.		Price Prov.	Weekly pay.	Total earnings.		
	s.	d.	d.	s. d.	l.	s.	d.
Altringham,	2	0	$3\frac{1}{4}$	5 4	38	15	3
Knotsford,	3	0	$3\frac{1}{2}$	6 9			
Stone,	1	6	$3\frac{1}{2}$	6 10			
Shenstone,	0	6	$3\frac{1}{4}$	5 8	45	6	0
Aston,	1	3	$3\frac{1}{2}$	8 7	51	5	6
Hagley,	3	6	$3\frac{1}{2}$	7 5	48	4	6
Brooms Grove,	1	6	$3\frac{1}{2}$	7 0	44	9	6
Bendsworth,	4	0	4	7 3	49	2	0
Bensington,	2	0	$3\frac{1}{2}$	7 1	45	11	6
Henley,	1	6	$3\frac{3}{4}$	7 5	44	1	9
Mims.	2	0	$4\frac{1}{4}$	7 9	55	2	0

Average of rates, 1s. 1d.

The supposed connection between these columns is very natural, and certainly ought to exist, *viz.* that rates being a tax to supply the wants of the poor, they must be high in those places where the price of provisions is high, and where the price of labour is low; and this conclusion is so very obvious, that we may reasonably look for a regular gradation in the rates, according to such circumstances.

Rates

Rates to 3d. in the pound.

Places.	Poor-rates	Price	Weekly	Total earnings,		
	per £.	Prov.	pay.	l.	s.	d.
	d.	d.	s. d.			
Newton,	2	2 $\frac{3}{4}$	9 3	55	4	3
Gosworth,	2	2 $\frac{3}{4}$	7 0	52	7	6
Fenton,	$\frac{3}{4}$	2 $\frac{3}{4}$	6 7	42	3	0
Holme,	3	2 $\frac{3}{4}$	7 7	49	17	6
Kabers,	3	3 $\frac{1}{2}$	7 7	45	11	6
Averages,	2	2 $\frac{3}{4}$	7 7	49	0	9

Rates from 3d. to 6d.

Risby,	6	3	8 5	63	10	9
Stillington,	6	2 $\frac{3}{4}$	9 0	66	6	0
Swinton,	6	2 $\frac{3}{4}$	7 6	53	5	0
Craikhill,	6	2 $\frac{3}{4}$	5 1	47	18	6
Asgarth,	6	2 $\frac{3}{4}$	7 1	50	5	6
Raby,	6	3 $\frac{1}{4}$	6 6	59	7	6
Morpeth,	6	3 $\frac{1}{2}$	6 0	45	3	9
Alnwick,	6	2 $\frac{3}{4}$	5 8	43	10	0
Hetton,	6	2 $\frac{1}{2}$	5 1	43	4	0
Cambo,	6	2 $\frac{1}{2}$	8 9	58	3	6
Ascot,	6	2 $\frac{3}{4}$	8 2	49	8	6
Garstang,	5	3 $\frac{1}{4}$	7 6	49	2	6
Ormskirk,	6	3 $\frac{1}{4}$	4 11	34	9	0
Shenstone,	6	3 $\frac{1}{4}$	5 8	45	6	0
Averages,	6	2 $\frac{3}{4}$	6 9	50	12	10

Rates

Rates from 6d. to 9d.

Places.	Pear-rates	Price	Weekly	Totalearnings.		
	per £. d.	Prova. d.	pay. s. d.	l.	s.	d.
Driffeld,	9	2 $\frac{3}{4}$	7 7	55	2	6
Schorton,	8	3	6 3	52	18	3
Gilling,	8	3 $\frac{1}{2}$	6 3	49	5	6
Rookby,	8	3 $\frac{1}{4}$	9 0	59	12	6
Belford,	7 $\frac{1}{2}$	2 $\frac{3}{4}$	5 2	44	1	0
Keswick,	9	2 $\frac{1}{2}$	6 10	49	5	9
Shapp,	9	3	7 7	50	14	6
Averages,	8 $\frac{1}{4}$	2 $\frac{3}{4}$	6 11	51	12	10

Rates from 9d. to 1s.

Kiplin,	1	2 $\frac{3}{4}$	6 0	54	1	3
Slensingford,	1	2 $\frac{3}{4}$	5 2	50	19	0
Liverpool,	1	3 $\frac{1}{2}$				
Averages,	1	3	5 7	52	10	1

Rates from 1s. to 1s. 6d.

Kirkleatham,	1 3	3	5 11	53	17	6
Fremington,	1 3	3	6 1	44	3	0
Rothbury,	1 5	2 $\frac{3}{4}$	6 9	50	15	0
Glenwelt,	1 6	2 $\frac{3}{4}$	7 1	49	1	6
Penrith,	1 3	2 $\frac{1}{2}$	6 2	53	11	3
Stone,	1 6	3 $\frac{1}{2}$	6 10			
Aston,	1 3	3 $\frac{1}{2}$	8 7	51	5	6
Broomsgrove,	1 6	3 $\frac{1}{2}$	7 0	44	9	6
Henley,	1 6	3 $\frac{3}{4}$	7 5	44	1	9
Averages,	1 4 $\frac{1}{2}$	3	6 10	48	18	1

Rates

Rates from 1 s. 6 d. to 2 s.

Places.	Poor-rates per £.		Price Prov. d.	Weekly pay.		Total earnings.		
	s.	d.		s.	d.	l.	s.	d.
<i>Altringham,</i>	2	0	3 $\frac{1}{4}$	5	4	38	15	3
<i>Benington,</i>	2	0	3 $\frac{1}{2}$	7	1	45	11	6
<i>Mims,</i>	2	0	4 $\frac{1}{4}$	7	9	55	2	0
<i>Averages,</i>	2	0	3 $\frac{1}{2}$	6	8	46	9	7

Rates above 2 s.

<i>Knotsford,</i>	3	0	3 $\frac{1}{2}$	6	9	-	-	-
<i>Hagley,</i>	3	6	3 $\frac{1}{2}$	7	5	48	3	6
<i>Bendsworth,</i>	4	0	4	7	3	49	2	0
<i>Averages,</i>	3	6	3 $\frac{1}{2}$	7	1	48	12	9

PROVISIONS.

	Rates.		
At 2 d. $\frac{1}{4}$ per lb.	-	-	0 s. 5 d. $\frac{1}{4}$
At 3 d.	-	-	1 2 $\frac{1}{4}$
At 3 d. $\frac{1}{2}$,	-	-	2 9

LABOUR.

7 s. 7 d. per week,	-	-	0 2
7 s. 1 d.	-	-	3 6
6 s. 11 d.	-	-	0 8 $\frac{1}{4}$
6 s. 10 d.	-	-	1 4 $\frac{1}{2}$
6 s. 9 d.	-	-	0 6
6 s. 8 d.	-	-	2 0
5 s. 7 d.	-	-	1 0

EARN-

EARNINGS.

<i>£.</i>	<i>s.</i>	<i>d.</i>					<i>Rates.</i>
52	10	1	-	-	-	-	1 0
51	12	10	-	-	-	-	0 8 $\frac{1}{4}$
50	12	10	-	-	-	-	0 6
49	0	9	-	-	-	-	0 2
48	18	1	-	-	-	-	1 4 $\frac{1}{2}$
48	12	9	-	-	-	-	3 6
46	9	7	-	-	-	-	2 0

Provisions here seem to have a remarkable effect on the rates; the progressive proportion is not broken; but then the advances are so prodigious, that one scarcely knows how to account for them. A farthing a pound makes a rise of 9*d.* in the rates; and a halfpenny of 1*s.* 7*d.* $\frac{1}{4}$. Three farthings raise them to 2*s.* 3*d.* $\frac{1}{4}$. Now this is out of all proportion, that rates should in one instance be trebled, and in another more than doubled, because provisions rise a farthing and a halfpenny *per lb.* Were only the price of bread taken, these and several other instances would appear more extraordinary; but the average of several articles is more satisfactory, as it includes the general rise in the prices of commodities; for although butcher's meat does not form any great part of the house-keeping of the poor, yet as they consume

consume other articles that have risen in price of late years, such rise is taken into our account, by giving the average of several articles.

The cause of the strong effect that here appears, I take to be this; poor rates are never nicely proportioned to the prices of provisions and the necessities of the poor; but depend on the temper of individuals, the caprice of parish officers and justices of the peace: They are as often raised by clamour, as by real necessity. Now a small rise in prices is much noised about, and never fails of sending many of the poor to the parish; not because they really are in want, but because they have an argument to use to officers and justices; and they gain by such means advances out of proportion to their *increase* of necessity. This somewhat accounts for a disproportion between rates and prices; but I must confess, by no means, for such a vast one as we see in the preceding tables.

In the article labour there is no kind of proportion to be found. Where the labourers earn 7 s. 1 d. a week, rates are 2 s. 6 d. in the pound higher than where they earn but 5 s. 7 d. Where they are paid 6 s. 10 d. the rates are 1 s. 4 d. $\frac{1}{2}$: But at 6 s. 9 d. earnings, they are only 6 d. which are such contradictions, that they prove

prove evidently that let labour be ever so dear, rates are not thereby eased, as it is extremely natural to suppose they ought to be. The table of total earnings also presents the same contradictions. Rates 1 s. in the pound, where the earnings are above 52 l. and 2 d. at 49 l. &c. &c. And this is a very strong argument against raising wages upon every rise of provisions: The high wages continue when the occasion is gone; and so far from being really serviceable to the poor, they come to the parish while amply paid as much as when their time was of the lowest value.

But to shew how little the amount of rates depends on the necessities of the poor, we need only turn to two or three places, where provisions are *high* and labour *low*: If any thing could cause high rates it would be such an union of circumstances; whereas at *Ormskirk* and *Sbenstone* labour is very low, and provisions high; and yet rates at only 6 d. Many other such instances might also be produced.

L E T T E R XLI.

THES E papers are swelled to such a length, that I find it necessary to overlook, in this review of the particulars, many subjects which I should not otherwise have passed over. I cannot, however, omit a few remarks on that important part of husbandry — manuring.

Lime, throughout most parts of the North, is what they principally depend on; the benefit they urge to be very great; and, considering they use only *stone* lime, it doubtless is so. But from the intelligence I gained in many places, I have great reason to believe, that this spirit of liming is not attended with the effects that many believe. Its greatest use, that of forming a part in composts, is little attended to. Upon black moory soils the use is exceedingly great; much more so than on any other land.

Paring and burning is general throughout the North and West, and the price pretty equal every where, from 14s. to 20s. Universal observation has proved it to be a most excellent practice, and has also proved that the idea of thinning the staple of the soil

foil by it, is false, and groundless. Turneps are the crop every where sown after it.

Folding sheep is shamefully and scandalously neglected throughout many counties. The very mention of such an omission is sufficient to display its barbarism.

The raising manure in farm-yards is at a very low pitch throughout most parts of the northern counties. This manure, with good management, is the best and cheapest a man can use. Three circumstances occasion this defect, so very fatal to husbandry :

First. The want of well-inclosed farm-yards, (called in the North *fold-yards*,) I saw scarce any that deserved the name.

Second. The feeding the hay about the fields. This execrable practice is productive of nothing but mischief. The pastures are poached all winter; and the dung arising from many herds of cattle lost; for a thin scattering about the fields is worthless.

Third. The not chopping their wheat stubbles for littering their yards. Left in the field it is quite useless as a manure, from want of *quantity* and *fermentation*; and it choaks the plough in breaking up. But

when it is carried into the farm-yard, to receive all the dung and urine of the cattle that eat the straw and HAY; it is converted into vast quantities of rich manure.

The Earl of *Darlington*, only by means of stacking his hay at his farm-yard, makes more dung in one year, than the common farmers on the same track of land in ten.

Respecting the point of stubble, I have not, at present, room to discuss it fully. I have heard objections made to it; but none of weight. In the register of my experiments in *Suffolk*, which I propose laying before the public, this matter will be proved, from a great variety of trials.

Respecting composts, most of the common farmers are backward; but the Marquis of *Rockingham* has carried this husbandry to perfection. Mr. *Scroop* has also exerted himself with uncommon spirit in it.

Upon the whole, the merit of manuring chiefly lies with the landlord; but their tenants are very backward. The dependence on lime is every where too great, and the neglect of farm-yard dung universal: The latter is of such importance in agriculture, that too much attention cannot be given to it.

LET-

L E T T E R XLII.

HAVING proceeded thus far in giving you the averages of most of the articles of intelligence I gained, I shall now attempt to draw the whole into one general view, and apply the particulars of this tour to the kingdom at large. This may be called the political arithmetic of the whole enquiry: but previous to general proportions, two points, particularly connected with this design, remain to be reviewed, which are, *tythes*, and the *value of the soil*. The following table will shew the state of tythes in many places through the counties I passed.

Places.	Comp. or gathered.	Comp. per £.	Comp. for Wheat	Comp. for Barley	Ditto for Oats.	Ditto Pease & Beans.	Hay.	Turns.
Risby,	Gath.							
Thorne,	Ditto.							
Newton,			6	6 4	3 4	3 4	3 1	9
Nunmington,	Comp.							
Kirkleatham,			5	0 3	0 3	0 3	0 2	0 0
Gilsdale,			5	0 3	0 3	0 3	0 2	0
Schornton,	Gath.							
Gilling,			5	6 4	0 3	6	2	0
Fremington,	Gath.							

Places.	Comp. or gathered.	Comp. per £.	Comp. for Wheat	Comp. for Barley	Ditto for Oats.	Ditto for Pease & Beans.	Hay.	Turn.
Kiplin,	Comp.							
Swinton,	Comp.	23. ar.						
Craikhill,			4 6 4	0 4	0 3	6 1	9 6	0
Slensingford,	Gath.							
Danby,			2 0					
Raby,			6 0 4	6			2 0	
Gosworth,			8 6 4	6 4	0 6	0		
Morpeth,			7 0 7	0 7	0			
Belford,			6 0 5	0 3	6 3	0		
Fenton,	Comp.							
Rothbury,	Ditto.							
Cambo,	Gath.							
Ascot,	Ditto.							
Penrith,	Ditto.							
Holme,	Ditto.							
Kabers,	Comp.							
Ormskirk,	Gath.							
Altringham,	Ditto.							
Stone,			4 0 3	0 2	0		1 6	
Shenstone,			4 0 3	0 2	6 2	6		
Aston,			5 0 2	6 2	6 2	6		
Hagley,	Gath.							
Broomsgrove			5 0 4	0 2	6 4	0		
Bensington,	Comp. { 3s. per acre round }							
Mims,			4 0 4	0 2	0 2	0 2	0	
Averages			5 2 3	11 3	4 3	4 1	10	

I shall

I shall only remark on this table, that the rates are high; and that the number of places in which tythes are gathered is very great; a discouragement to agriculture that is inconceivable. Of all the oppressive taxes the wit of man could devise, none throws such a damp on the culture of the earth as those which increase in proportion to produce; being literally *taxes on improvement*: But at every place where I made enquiries, all ranks agreed, the clergy as well as others, that tythes were universally found a great discouragement to husbandry. Compositions are not the remedies they at first sight appear; for they are often proportioned to the good or bad husbandry of particular farmers; and always depend on the will of the rector.

As to the value of the soil, the following table will shew the number of years purchase at which land sells in those places where the article is minuted: I add the rent, by way of an index to the country; but in several instances it respects only the cultivated parts, for instance, at *Fremington, Glenwelt, Keswick, &c.*

Places.	Years purchase.	£.	s.	d.
Risby,	— 35 —	0	9	3
Thorne,	— 35 —	0	10	0
Wentworth,	— 35 —	0	8	0
Driffield,	— 40 —	0	10	0
Newton,	— 35 —	0	12	0
Kirkleatham,	— 47 —	0	8	0
Gilsdale,	— 35 —	0	10	6
Schorton,	— 35 —	0	10	0
Gilling,	— 35 —	1	1	0
Rookby,	— 35 —	0	12	0
Fremington,	— 30 —	1	10	0
Swinton,	— 40 —	0	16	0
Craikbill,	— 37 $\frac{1}{2}$ —	0	13	0
Slensingford,	— 37 $\frac{1}{2}$ —	0	8	0
Danby,	— 35 —	0	12	6
Raby,	— 35 —	0	16	0
Gosworth,	— 29 —	1	0	0
Morpeth,	— 32 —	0	12	0
Alnwick,	— 30 —	0	15	0
Belford,	— 30 —	0	15	0
Hetton,	— 30 —	0	6	6
Fenton,	— 30 —	0	8	0
Glenwelt,	— 35 —	0	12	6
Penrith,	— 30 —	0	9	0
Keswick,	— 37 $\frac{1}{2}$ —	1	5	0
Shapp,	— 32 $\frac{1}{2}$ —	0	11	3
Garflang,	— 35 —	0	17	0
Ormskirk,	— 35 —	0	15	0
Altringham,	— 30 —	1	0	0

Knotsford,

Place.		Years purchase.		Rent.		
				£.	s.	d.
Knotsford,	—	31	—	0	16	0
Stone,	—	37 $\frac{1}{2}$	—	0	16	0
Shenstone,	—	32 $\frac{1}{2}$	—	0	15	0
Aston,	—	30	—	0	17	6
Hagley,	—	31 $\frac{1}{2}$	—	1	0	0
Bendsworth,	—	29	—	1	1	0
Bensington,	—	30	—	1	1	6
Mims,	—	28	—	0	12	0
Average, - - -				33 $\frac{1}{2}$.		

As to the proportioning these and the preceding averages to the whole kingdom, perhaps some of my readers may think the general authority too small; that the average of this tour is different from that of the whole kingdom; this I grant may probably be the case; but that the variation is very considerable, I do not think is probable. The journey lies through the counties of *Northumberland*, *Cumberland*, and *Westmoreland*; and through the uncultivated parts of *Yorkshire*, which are amongst the most barren in the kingdom. It also extends several hundred miles through some very fertile counties. Upon the whole, I have reason to think the difference not very great between the country here travelled, and the kingdom at large: But candour requires me to observe, that if there

there is a variation, I apprehend it is in favour of fertility; that is, that the kingdom in general is richer than the average of this tour. *Derbyshire* (not included) it is true, is chiefly uncultivated; but then all the other counties south of *Yorkshire* and *Lancashire*, are in general well cultivated; and many of them remarkably rich, and full of manufactories. If therefore there is a variation, it certainly is in favour of the kingdom at large. But it should be observed, that there is no slight degree of utility in proportioning every sort of country to the whole kingdom. I demand, for instance, the population, product, rent, &c. of the whole kingdom, if as waste as *Northumberland*? What are the same proportions if as well cultivated as the isle of *Thanet*? What are the proportions of the whole kingdom, compared with the west of *Norfolk* before the discovery of marle? and those, since that improvement? Such a knowledge of the importance of fertility and improvement, is of some consequence; and when it extends to so considerable a part of the kingdom as the counties here travelled, certainly demands more than a slight attention.

This

This method of gaining a knowledge of the rural œconomy of the nation, although not perfect, is far more satisfactory than conjectures, and general calculations, founded on circumstances extremely foreign to the subject; like many which, at different times, have been published concerning rental, value, &c.

The number of acres in *England* has been variously calculated, by different writers, from twenty-nine to forty millions, exclusive of *Wales*. The rev. Mr. *Harte*, in his justly applauded *Essays on Husbandry*, calculates them at thirty-four millions: I shall follow this supposition, as that gentleman has evidently consulted most writers on these subjects, and is withal particularly accurate.

From these thirty-four millions I know of nothing to be deducted but large rivers, (small ones and roads are always measured to the adjoining lands; the acres of the farms inserted in the minutes were always the gross number commonly mentioned in conversation,) towns, cities, houses, parks, chaces, royal forests, woods, and commons: Barren and uncultivated lands must not be excluded, as they come pretty largely into the particulars of many of the farms themselves. A million and half
of

of acres must be an ample deduction for those articles: But to obviate objections, I shall suppose them to amount to two millions *: The remainder is thirty-two millions; for such lands as compose the preceding two hundred and fifty farms; that is, grass and arable; including good and bad, cultivated and uncultivated †.

According to the preceding farm, the average, in every particular of the whole tour, this quantity of land will contain as follows.

* That is, to as much land as is contained in the four counties of *Essex, Hertfordshire, Middlesex, and Huntingdonshire*. Surely this must be a very ample allowance.

† This being a point of much importance, deserves attention: The number of acres is, by all conjectures, from the mensuration of maps, and liable to objections. There are many reasons for supposing the number greater than I have taken; so that if my deduction of two millions is thought too little, that objection may be nearly removed by supposing a greater total. When there is such an uncertainty in the real total, the best light to view the following calculations in, is that of thirty-two millions of acres, whether more or less than *England: Scotland, Wales, and Ireland* are very near at hand to supply deficiencies.

STATE,

STATE, RENTAL, and VALUE
of the SOIL.

Acres in all,	—	32,000,000
Ditto of arable land,	—	16,000,000
Ditto of grass,	—	16,000,000
Number of farms,	—	111,498
Rental *,	— —	£. 16,000,000
Value of the soil at 33 $\frac{1}{2}$ years purchase,	} £. 536,000,000	

The rental here specified is exclusive of that of houses; how much higher they would carry it, is a question that can only be conjectured; but considering the amazing riches of the city of *London*, and the flourishing increasing state of so many other cities and towns, with the prodigious number of splendid as well as convenient country seats that are every where spread over the kingdom, the rent of them must be very considerable; and undoubtedly raise the above sum to considerably more than twenty millions. When the houses of *London* were calculated at one hundred

* The exact rent is 9s. 11d. but I call it here
10s.
thousand,

thousand, the rental was supposed to amount to two millions; now they are an hundred and fifty thousand, it ought, by the same rule, to amount to three millions; though I believe that sum beyond the truth; it is an average of £. 20 *per* house: But those of the whole kingdom must exceed, by these rules, with proper allowances, five millions, or make the rental twenty-one millions; which, all circumstances considered, particularly the rental of this tour being probably under that of the whole kingdom, must, I think, yet remain under the truth. Five millions a year, at twenty years purchase, amount to one hundred millions; which makes the total value £. 636,000,000.

Suppose that stock yields a profit to the owners of 3 *per cent.* their annual income then amounts to £. 19,080,000.

At 3½ *per cent.* it comes to £. 22,260,000.

At 4 *per ct.* it amounts to £. 25,440,000.

It certainly must be a matter of vast consequence to keep the property of the kingdom on the increase; which I take to be the surest mark of a flourishing people: Now it is visible, from this table, that agriculture forms one of the grand pillars of the riches of the State; improvements in it increase property, and consequently income, and ought therefore to receive from poli-

politicians, and the Great, all possible encouragement. The rise of rent of 1 *s.* *per* acre increases the rental of the lands of *England* £ 800,000 a year. Nor should it be considered as a *transfer* of income from the farmer to the landlord; but as a *creation* of fresh income. There is scarcely a track of country in the kingdom in which a rise of rent (to a certain pitch, which, by the way, is much higher than generally believed,) is not attended with a corresponding *increase of product*, but much beyond the proportion. Instances are every where innumerable of farms low rented that have been occupied by none but slovenly, poor, and ruined tenants; whereas the same farms doubled, or trebled in the rent, become the fortunes of succeeding occupiers. There is nothing in this difficult to be accounted for; high rents are an undoubted spur to industry; the farmer who pays much for his land, knows that he must be diligent, or starve. Land of 20 *s.* an acre *must* yield good crops, or its occupier be ruined. Whatever be the nature of the soil, that circumstance will make it yield them. In no part of *England*, where rents are low, is there good husbandry. *Norfolk* is not an exception; the waste parts of that county were thrown into very large farms; the

the soil would yield nothing without marling; consequently none hired it but men who were either rich, or could command money. A first expence, of three or four pounds an acre, is, considering the value of ready money to a farmer, no low rent. Wherever land is underlet, twenty to one but the farmers are slovens; unless some such circumstance operates.

Hence let me remark, that there is no evil more pernicious to the public, than great families, through a false magnificence, letting their estates be rented at low rates, from father to son, by a pack of slovens, rather than not have it to boast, *that their rents have never been raised*; which is nothing more than saying, *My tenants are poor; their husbandry bad; and the state injured in wealth, revenue, and population.* A very patriotic boast! Universal experience justified this assertion. There is no good husbandry without high rents; and the landlords, who, through a false pride, will not raise, when they easily might, do an inconceivable prejudice to their country. I will venture to assert, that the man who doubles his rental, benefits the state more than himself.

Stock

STOCK in HUSBANDRY.

Total according to the average }
 sum of 391*l.* necessary to } 62,560,000
 stock 100*l.* a year, }

Live stock at the average of }
 228*l.* per 100*l.* a year *, } 36,480,000

Implements at the average of }
 63*l.* per 100*l.* * } 10,080,000

Furniture at the average of }
 70*l.* per 100*l.* a year *, } 11,200,000

Sundry articles at the average }
 of 219*l.* * } 35,040,000

Number of draught cattle, 1,170,729

Cows, - - - - - 1,337,976

Fatting beasts, - - - - - 1,003,482

Young cattle, - - - - - 2,229,960

Sheep, - - - - - 28,989,480

Suppose the draught cattle }
 to be worth, at an ave- } £. 11,707,290
 rage, 10*l.* the amount is }

Suppose the average value of }
 the cows to be 7*l.* the } £. 9,365,832
 total is }

* These, it should be remarked, are not the parts of the 391*l.* but the averages of those places where they were *separately* minuted.

Suppose the value of the fat-
ting beasts to be 10% at a } 10,034,820
medium, the amount is }

Suppose the mean value of the
young cattle to be 4% the } 8,919,840
total is }

Suppose the average value of
sheep to be 10 s. the total is } 14,494,740

Suppose the 111,498 farms in
England each to have, on an
average, thirty swine of all
sorts, the number is }

Suppose the average value to
be 15 s. the total is } 2,508,705

Suppose each farm to possess
poultry of all sorts to the va-
lue of 3%. at an average, the } 334,494
total is }

Total value of all the live stock }
according to these calculations } 57,365,721

Live stock by this }
rule, } 57,365,721

Implements by the }
former, } 10,080,000

Furniture by ditto, 11,200,000

Sundries by ditto, 35,040,000

Total according to this joint }
account, } 113,685,721

The

The article furniture I have inserted from the minutes, as truth required me to do, it being the average of those accounts which gave it distinctly ; but there is great reason to believe that furniture does not equal implements in general : But I do not substitute a conjecture, because the total undoubtedly remains under the truth : And this I think is obvious for more reasons than one.

The total live stock, according to the sums possessed by farmers at stocking their farms, is 36,480,000 *l.* but by the other calculation it amounts to 57,365,721 *l.* the difference of the first sum from the total stock, cannot be less than the variation of these sums ; for it must be considered, that not one farmer in an hundred has, at first coming into a farm, nearly the stock he possesses a few years afterwards. All of them hire too much land to stock it fully ; they increase it by degrees, till they have the proper quantity. No truth in husbandry can be more generally known than this. But the articles *implements* and *furniture* are in the same predicament, and increase proportionably ; consequently should be calculated by the proportion of the two amounts of live stock ; but this I shall desist from, as I think these articles *appear* to be proportionably higher than live stock.

I apprehend the difference between the stock on entering a farm, and the stock some years after, is to each other at least as 62,560,000*l.* to 113,685,721*l.* For the sake of whole numbers we may perhaps state

The general stock in husbandry at } *£*. 110,000,000

Suppose this stock pays
an interest of 10 *per*
cent. the profit of agriculture is } 11,000,000

At 12 *per cent.* it is, - - - 13,200,000

At 15 *per cent.* - - - 16,500,000

At 20 *per cent.* - - - 22,000,000

Upon this scale I should remark, that the profit of the kingdom's agriculture is undoubtedly a very considerable sum. The common notion of this matter is, that the farmers make three rents; one for the landlord, one for expences, and one for their own profit: But this is certainly erroneous: A rent will not pay expences if the husbandry is pretty good; and their own profit, there is much reason to believe, exceeds a rent. In lands already improved, or naturally rich, it equals it; and in improveable farms there can be no doubt of its exceeding it. Supposing the equality, the aggregate of profit amounts to 16,000,000 *l.*; and allowing a surplus, will

will raise it to 18,000,000, and probably to twenty.

Now a profit of from sixteen to twenty millions sterling *per annum* most undoubtedly cannot arise from a trifling sum in stock; according to any probable proportions it cannot arise from a much less sum than the total I calculated, *viz.* 110,000,000 *l.*; upon which I must be allowed to observe, that the concurrence between the *certain* profit, according to any reasonable estimation with my calculated total of stock, confirms it; at least so far as to satisfy us that the deviation, whatever it may be from truth, is not considerable*.

PRODUCT of the SOIL.

Acres of wheat and rye, 3,066,195

Product of ditto at the general average *per acre* of 3 qrs. } *Qrs.* 9,198,585

Value of ditto at 38 *s.* a quarter †, } *£.* 17,476,310

* How well does this agree with the account of the author of the *Enquiry into the prices of wheat, malt, &c.* p. III. who makes the profit on arable land 68*l.* 17*s.* 7*d.* $\frac{1}{2}$ per cent. Could the utmost exertion of prejudice and ignorance deduce a more palpable absurdity!

† The quantity of rye is very small; trifling in comparison to that of wheat: The latter I reckon at 40*s.* per quarter, and the quantity of rye to reduce the whole to 38*s.*

K k 3 Acres

Acres of barley,	- - -	2,898,948
Product of ditto at 4 qrs.	} 2rs. 11,595,792	
per acre,		
Value of ditto at 17s.	- - -	£. 9,856,423
Acres of oats,	- - -	2,285,709
Product of ditto at 4½	} 2rs. 10,285,690	
qrs. per acre,		
Value of ditto at 15s.	- - -	£. 7,714,267
Acres of pease,	- - -	1,282,227
Product of ditto at 2 qrs.	} 2rs. 3,766,538	
7 bush. 2 pecks,		
Value of ditto at 24s. per qr.	- - -	£. 4,519,865
Acres of beans,	- - -	668,988
Product of ditto at 3 qrs.	} 2rs. 2,592,328	
7 bush.		
Value of ditto at 24s.	- - -	£. 3,110,793
Acres of turneps,	- - -	1,560,972
Value of ditto at 46s.	- - -	£. 4,110,599
Acres of clover,	- - -	1,724,737
Value of ditto at 40s.	- - -	£. 1,449,474
Total product of arable	} £. 48,237,691	
crops exclusive of po-		
tatoes, cabbages, &c.		
&c. &c. &c.		
Product of the cows at	} 7,107,996	
the average of £. 5 6 3,		
		Profit

Profit on the sheep at the }
average of 10 s. } £. 14,494,740

Weight of the wool at the }
average fleece of 5 lb. } lb. 144,947,400

Value of ditto at the ave- }
rage price of 5 d. $\frac{3}{4}$, } £. 694,539

Profit on the fattening beasts }
at 7 l. } £. 7,024,374

Profit on young cattle at }
20 s. } £. 2,229,960

Suppose the profit on swine }
to be 15 s. } £. 2,508,705

Suppose the profit on poul- }
try to equal their value, } £. 334,494

Total product of live stock, £. 33,700,269

And this sum is the total product of
grass lands, exclusive of hay sold to towns.

Suppose this makes it the }
sum } £. 35,000,000

Total product of the soil, }
except as before ex- }

cepted, and exclusive of } £. 83,237,691

woods, parks, chaces, }
&c. }

I have no rule by which even to conjecture
the product of woods, and that of scat-
tered trees and hedge-wood; all together
must amount to a very considerable sum.

This table requires some explanation, for it totally contradicts the ideas of several writers, for whose works I have the greatest respect. The very ingenious author of the *Three tracts on the corn trade*, p. 142. second edit. calculates the growth of wheat and rye in *England* and *Wales* at 5,110,255 quarters; whereas I suppose the quantity in *England* alone to amount to 9,198,585 quarters; which is a prodigious difference. The growth of barley he makes 4,603,272 quarters: My account is 11,595,792 quarters. Oats he calculates at 4,240,947 quarters: In these sheets they are reckoned at 10,285,690 quarters. I have the utmost deference for the calculations of so very acute and sensible a writer; but at the same time I must be allowed to remark, that the *data* upon which he calculated appear somewhat more liable to error, than those upon which I have proceeded.

That gentleman founds his calculation on the quantity of corn consumed by men and animals. The consumption by men is taken from average quantities eat by different people; the latter is conjectured. The different proportions between the eaters of wheat, rye, barley, &c. is conjectured; the number of the people is conjectured; the quantities otherwise applied are

are imagined, and, to appearance, rather at random ; and the total of these conjectures supposed to be the annual growth. Now it must be evident, that this method of coming at the growth, is at best very fallacious.

I am far from exhibiting my own calculations as free from all these objections. This tour extends over but a part of the kingdom ; and I have often repeated, that I am now only proportioning the particulars of this extent to 32 millions of acres. I am of opinion the proportion is not unjust ; but my readers may think differently ; in the mean time, I venture only to assert, that stating such proportions have a particular use ; and that there is a much greater probability of the exactness, than of discovering the quantity of corn raised, from that eaten by fifteen or twenty people.

The proportions of the different grains, I have taken from a variety of minutes in a course of five and twenty hundred miles, through all sorts of soils ; the averages of which I can scarcely believe to be deceitful. The growth of each *per* acre is taken, with great exactness, from the same minutes, and is the average of so considerable a part of the kingdom.

In

In respect to the number of acres in *England*, I adopt the assertion of a very accurate writer ; but I should remark, that the greatest reductions, according to the *lowest* estimates ever made, will not bring the above quantities near to those of the author of the *Three Tracts*. For considering that he includes *Wales*, my totals are near three times over larger than his. Now if my *data* are so very false, the total amount of product, which I have made £. 83,237,691, would be reduced to little more than a third of that sum ; which single state of the case is sufficient to prove, that this gentleman's *data* are erroneous. For I shall by and by shew, that such a product would not amount to half the very *expenditure* of husbandry ; and that the farmers, instead of making fortunes, would all starve.

In a word, I cannot but apprehend, that the method which I have adopted, of calculating these totals, is founded more in facts, than that of the very ingenious writer of the *Three Tracts*. But I much wish for opportunities to complete the Tour of these kingdoms ; in which case I should be able totally to calculate from facts, and in no instance to depend on supposition or conjecture.

The

The importance of increasing the quantities of product, must, from these accounts, appear extremely clear. It much behoves all lovers of agriculture to encourage the culture of the earth, to increase the product of that which is already in cultivation; and to bring waste soils into use, that the total of products may be carried to their utmost height; upon which depends every circumstance that concerns the prosperity of a nation.

EXPENDITURE of HUSBANDRY.

Under this article I shall attempt to draw into one view, as many of the farmers expences in conducting their business, as can be calculated. It is a point of much consequence to know the whole amount and nature of the kingdom's industry, and the circulation dependant on industry.

The rental was before found
to be £.16,000,000

Tythes at the rates before
inserted, the average of
the Tour,

Wheat, - - - 792,090

Barley, - - - 567,710

Oats, - - - 380,951

Pease and beans, 325,402

Suppose

Suppose that of tur- } £. 16,000,000
 neps and clover } £. 283,213
 2 s. 6 d.

Suppose those of }
 grafs lands to e- }
 qual (small tythes } 1,566,250
 included) those of }
 $\frac{2}{3}$ of the arable, }

Total, - - - 3,915,625

Supposing the whole com- }
 pounded for; but so con- }
 siderable a part of it being } 5,500,000
 gathered, cannot make }
 this sum less than }

Poor rates at the average of }
 1 s. 1 d. in the pound rent, } 866,666

Suppose the surveyor's, con- }
 stable's, church-warden's, }
 and all other parish ex- } 200,000
 pences to amount to 3 d. }
 in the pound, }

The number of men servants }
 is 222,996. The amount }
 of their wages at the ave- } 1,892,675
 rage rate of 8 l. 9 s. 9 d. }

£. 24,459,341

Value

£. 24,459,341

Value of their board, &c. at }
the average of 9 l. } 2,006,964

The number of maid servants }
is 167,247. The amount of }
their wages at the average } 577,001
of 3 l. 9 s. is }

Suppose the value of their }
board to be 5 l. the a- } 836,235
mount is }

The number of boys is }
111,498. The amount }
of their wages, at the a- } 345,643
verage of 3 l. 2 s. is }

Suppose the value of their }
board, &c. to be 6 l. 10 s. } 724,737
the amount is }

The number of (constant- }
ly employed) labourers is }
334,494. Their earn- } 6,160,262
ings, at the average of }
7 s. 1 d. per week, a- }
mount to }

£. 35,110,183

There

£. 35,110,183

There remains all the extra labour; or that which is not regular: It amounts, in every farm, to a considerable proportion of the total, as it includes most of the harvest, hay, and other busy times, and the prices consequently high, it cannot be calculated, for men, women, and children, at less than a third of the last sum, or

2,053,420

The renewal of the stock of draught cattle, (they being an unprofitable stock, and not calculated in the preceding accounts to yield any profit) may be calculated (including the expence of farriers, &c.) at an annual expence of a 15th of the total value, or

780,486

The annual expence of horses was found, on an average, to be 6*l.* 6*s.* but as some few of the total are oxen, I shall call it 6*l.* or in the whole

7,024,374

 £. 44,968,463

£. 44,968,463

It is difficult to calculate, with exactness, the amount of wear and tear; the only *data* my minutes yield me is the rule in *Northumberland*, of the blacksmith's performing all their work of *repairs* at 40s. *per* horse *per annum*; but this is in a country where coals and iron are plentiful; nor do they afford any *new* implements at that price. According to this rule, I should suppose the average of the tour would amount, including the *renewal*, as well as the *repairs*, at 4*l.* *per* horse; and the amount of all other articles, such as the wheelwright, carpenter, collar-maker, &c. and the wear, &c. of sundries, in all articles, at 3*l.* *per* horse more, in all to 7*l.* or

8,195,103

 £. 53,163,566

In

£ 53,163,566

In numerous places the tenants repair the buildings of the farms; I apprehend, throughout two thirds of the kingdom: Suppose it half, and that it amounts to 5 *l.* per farm, per ann. on an average; this is

278,745

The quantity of seed wheat is, upon an average throughout the four, 10⁶, and rye 12th of the product; say, therefore 11th; consequently it amounts to 836,235 qrs. which at 38 *s.* per quarter, is

1,588,844

Of barley it is a tenth of the product, or 1,159,579 qrs. and at 17 *s.* per qr. comes to

985,642

£. 2,574,486

53,442,311

Of

£. 53,442,311

£. 2,574,486
 Of oats it is an 8th,
 or, 1,285,711 qrs.
 and at 15s. comes } 964,282
 to

Of pease it is a 7th,
 or, 538,076 qrs.
 which at 24s. a- } 645,691
 mounts to

Of beans it is an 8th,
 or, 324,041 qrs.
 which at 24s. a- } 388,849
 mounts to

Suppose all other
 feeds to amount } 300,000
 to

Suppose the farmers to pay
 4 per cent. interest for their
 money; that of the total } 4,400,000
 of stock, or 110,000,000,
 is per annum

Total £. 62,715,619

It is to be remarked, that this account
 does not include some particulars which are
 not susceptible of any calculation, and which
 it may easily be supposed amount to a very

considerable sum. Considering that all the articles minuted here are undoubtedly existing, and that none unthought of, come into this account, I apprehend it will be supposed a moderate allowance to call the total £.70,000,000. I do not imagine it can, in any way of calculating, be laid at a less sum proportioned to the given particulars. *Extraordinary* losses of live stock do not come into the estimate, no more than other circumstances, which cannot fail of bearing, in a course of years, pretty heavy upon the farmer. However, to obviate objections, I shall call the total expenditure £.65,000,000.

But whether this sum, or that specified in particulars, be supposed; in either case the amount must prove very decisively, that the particulars of product given by the author of the *Three Tracts*, quoted above, are far below the mark; for by proportioning the total given by the preceding accounts, to the amount of those particulars mentioned by that writer, we find that the total product of the lands of *England* will not amount to near half the annual expenditure of husbandry; which implies so manifest a contradiction, that truth is totally irreconcilable to it: And although some of my particulars are conjectural, and others may be contrary to some received

opinions, yet I apprehend it will prove an unsurmountable difficulty to reduce them all so much to nothing, as is necessary to render them consistent with that writer's account.

PROFIT of HUSBANDRY.

The total product appeared } £. 83,237,691
to be

Ditto expenditure - - 65,000,000

£. 18,237,691

Which remainder should be the farmer's profit; or that sum, out of which he lives, maintains his family, pays his market expences, and all superfluities. It amounts to something above a rent, but does not rise to such a considerable sum, or fall to such a low one, as to give any reason from thence to think the particulars from which it is calculated, overstrained on the one hand, or under calculated on the other.

INCOME of the SOIL.

The preceding calculations give us the income of the following ranks of the people.

Landlords,

Tenants,

L 1 2

Paro-

Parochial clergy,

The industrious poor employed by the
soil,

The non-industrious poor.

The landlord's rent was } £.16,000,000
found to be

The tenant's profit, - - - 18,237,691

The clergy, - - - - 5,500,000

The industrious poor (be- }
ing the amount of la- } 14,596,937
bour)

The non-industrious poor, }
(being the amount of } 866,666
rates)

Interest of money, - - - 4,400,000

Total of these several incomes }
arising from the soil, } 59,601,294

It is, however, to be remarked, that these incomes are exclusive of those very considerable receipts which manufacturers draw from all these classes, amounting perhaps to half the total.

As a continuation of this calculation, we might further remark, that the product of the soil may be divided into two parts; — Productive — and non-productive income. The first includes all those sums that form the income of different classes of men;
the

the second, such as may be ranked under the contrary head, *viz.* maintenance of horses, &c. &c. The division is not easily calculated, for part of the above sums are of one sort, and part of the other, such as wear and tear, &c. &c. however, this point would certainly add considerably to the above total. This sum, with the product of manufactures and of commerce, unite to form the aggregate income of the State. It is a point of no slight importance to know the total amount; but thus far we may venture to pronounce, that agriculture is the grand product that supports the people. The factitious riches of trade and fabrics bear no proportion to this fundamental support; not only of them, but of every business, profession, and order of the kingdom.

POPULATION.

Number of men servants,	-	222,996
Maid ditto,	- - - - -	167,247
Boy ditto,	- - - - -	111,498
Labourers,	- - - - -	334,494
Men servants and labourers,		557,490
Farmers,	- - - - -	111,498

L 13

Num-

Number of souls according
to the average of fifteen
per 100/. a year, exclusive
of extra labour, } 2,400,000

The extra labour I before
calculated as a third of
the labourers, according
to which it amounts to of
souls } 557,490

Total, - - - - - 2,957,490

Respecting a deduction from this amount, on account of the maids and boys in the farmers families being part of them children of the labourers, it is difficult to calculate it with tolerable precision; but we may be pretty certain that it cannot amount to half the total, if it is called 157,490 souls, including all in this total not maintained by husbandry; the allowance I apprehend much greater than absolutely necessary to be made.

This will reduce the } 2,800,000 souls:
total to

And this is about eleven acres and a half per head; and 5*l.* 15*s.* rental.

This amount is exclusive of a vast number of people as much dependent on, and maintained by agriculture, as the very plough-

plough-man who cultivates the soil; for instance, the whole tribe of landlords; a vast body, branching into a wonderful variety; all those manufacturers who work for the farmer alone; and for the landlord in his rural capacity alone; such as wheelwrights, blacksmiths, collar-makers, carpenters, brick-makers, masons, thatchers, glaziers, &c. &c. And in another path, all those that *cloath* these numerous bodies of people, furnish their houses, and administer to their luxuries. Besides, there are a vast portion of the clergy, and the parochial poor: all together most undoubtedly form a number, which bears a great proportion to the sum total of the kingdom's population.

RECAPITULATION.

Rental, - - - -	£. 16,000,000
Value, - - - -	536,000,000
Supposed rental houses } included, }	21,00,0000
Value of total - - - -	636,000,000
Stock in husbandry, - -	110,000,000
Product of the soil in } husbandry, excepting } woods, parks, chaces, } &c. }	83,237,691
Expenditure of husbandry,	65,000,000
L 1 4	Profit

Profit of husbandry, - £. 18,237,691

Income arising from the }
 soil, exclusive of ma- } 59,601,294
 nufacturers, }

The population of agri- }
 culture ; exclusive of }
 landlords, clergy, pa- } 2,800,000
 rochial poor, and ma- }
 nufacturers, }

This little table may be called that part of THE STATE OF THE NATION which depends on rural œconomics. I shall venture a few remarks on its general prosperity, as deducible from these, and other particulars, scattered throughout this fourth volume. In such a design it is requisite to connect objects that may, at first sight, appear too unconnected, but which, upon a nearer examination, will be found the links of one grand chain.

The first point of capital importance, is the product of the soil. From this arises every thing else : It is the total, which yields an income to so many ranks of people : It is the foundation, if I may so express myself, whereon the kingdom is built : The riches, income, and population of the state evidently depend on this : Increase the product of the soil, and you inevitably increase all the incomes arising from

from it, you add to the stock of riches, and increase the number of souls dependent on agriculture; all which effects are of the most important kind. These consequences will plainly appear if we attend a moment to the progress of product.

The farmers receive, in the first place, the total of this amount: Out of it they disperse income to the other classes; in rent to the landlords; in the amount of labour to the industrious poor; in rates to the non-industrious poor; and in tythes to the clergy. Their other expences, in various instances, maintain many other ranks of people; and the surplus remains for their own profit; not to lay up as *savings*, but to maintain themselves and families, in necessaries and superfluities; that is, chiefly in the consumption of manufactures.

We have found the total of product to be better than eighty-three millions: now suppose it should, by an increase of good husbandry, be carried to an hundred millions, or any other supposed amount; in what manner would this increase act upon these various ranks of people? It would not, (as some writers have foolishly imagined,) centre only in the farmers profit, although such a circumstance would be the most favourable to the State. The clergy would at once come in for their share of
the

the increase; the landlords would do the same in a rise of rent; for high profits of agriculture, in this respect, is but another word for *competition for farms*. The very term, *increase of product*, in some measure implies an increase of labour; that is, of income to the industrious poor: So that all ranks come in with the farmer for their share of an increase of product. His profit is, doubtless, increased; but is not that, at the same time, increasing the income of all those manufacturers among whom he necessarily expends his surplus?

The greater the farmers profit, the more the State is benefited, and without considering either landlords or clergy. Which of these three ranks of people expend their income most to the public good?

Those expences which are productive of riches, are, of all others, the most beneficial: Such are the additions which people, in any kind of trade or business, make to that business; or the expenditure of money in improving estates, &c. Now, upon an average of farmers and landlords (for the clergy, in this view, are out of the question,) the former class undoubtedly expends a much greater proportion of additional income in the improvement of culture, the increasing of cattle, &c. &c. than landlords in the improvement of estates.

And

And this superiority is so great, that it is almost beyond the power of calculation. It would be very extraordinary if it was otherwise. Landlords are engaged in no business, or pursuit, which gives them an idea of a profitable expenditure of their money; and this circumstance is the most unfortunate that can befall any set of people. The estates of some are fully improved; and many that possess waste lands, or soils in indifferent order, from custom, inattention, and want of spirit, never think of employing any additions that may be made to their income in such works. On the contrary, farmers are constantly engaged in a profitable trade; every day shews them some improvement, that would repay the expence with good interest. Besides that universal, tho' unseen one, of a general improved culture, from money always being in the cultivator's pocket,

But *expences* admit of another view: The consumption of *British* manufactures is the consumption of national industry; and much more beneficial than consuming the industry of, that is, maintaining industrious *Frenchmen* and *Italians*. Make an addition to a landlord's income, and it will be spent in an enlargement of his former expences; that is, he will drink so much more *Burgundy* and *Claret*, and import the more silk,

filk, velvet, and spices. The farmer's parallel expences are very different; they scarcely in any instance rise above the manufactures and products of his own country; and where he does exceed, as in tea and sugar, &c. the excess bears no proportion to the class of landlords.

But if these particulars were not, in the detail, sufficient to prove the superiority; yet the single point of the one class being idle, and the other industrious, should be alone decisive. An addition of income had certainly better be thrown into the latter than the former. And thus much in answer to those who *complain* of the profit of husbandry.

But whether the profit was peculiar to one or another party, still the general benefit to the state is indisputable. Increasing products is increasing the rental of the soil, the value of it, the general income of all ranks, and the number of the people.

But when we speak of *the good of the state*, it is necessary to be understood with some degree of precision. In this age it is not sufficient for the individuals of a nation to be well fed, and well cloathed; to live in good houses, well furnished; and, in a word, to be easy and happy: There is an aggregate interest, which must also be attended to, which consists of two kinds,
first,

first, the support of internal government and national works; and, secondly, the power of the nation relative to her neighbours; that is, the possession of such a degree of power as may secure her independency in any wars which ambition or accident may kindle.

Without numerous preparatory explanations, we must come to the point: These aggregate interests, in the present enquiry, are but other names for the public revenue; it is that which sets in motion the whole machine of government. Thus, the general wealth of the kingdom must not only be sufficient for the private ease and affluence of individuals, but also for the levying all those taxes which form the public revenue.

Both public and private wealth can arise only from three sources, *agriculture*, *manufactures*, and *commerce*. Hence the connection and importance of the present reflections must be sufficiently manifest. Agriculture much exceeds both the others; it is even the foundation of their principal branches.

In this view appears the vast importance to the state, of carrying the products of the earth to the highest pitch of which they are capable. Raising them, as I before observed, is increasing *general wealth*, and
raising

raising the *income* of all the ranks of the people; the public stock is therefore augmented; and as taxes are mostly laid on *consumption*, or *possession* (principally the former) an increase of riches and income infallibly increases taxes: Since perhaps nine tenths of income is, in some way or other, melted in the consumption of taxed commodities.

But that this point of raising products may be comprehended the clearer, I shall shew, that improvements, small when separately considered, would be attended with great effects upon the aggregate amount of all.

Suppose the product *per*
acre of wheat and rye
was raised four bushels, } £.2,912,718
it would add to the ge-
neral product of the soil }

Suppose that of barley and
oats received the same } 2,089,193
increase, it would be }

The same addition to pease
and beans would be } 1,375,468

20 s. *per* acre value of tur-
neps and clover, would
be a rise very easily effec-
ted by good husbandry; } 2,285,709
the amount would be }

£.8,663,088

£.8,663,088

If the present unprofitable management of cows is considered, respecting their winter food, and the swine dependant; we may safely venture to calculate the loss at 40s. a cow; a better conduct would consequently rise to that increase of product, or

2,675,952

The breed of sheep, found to be so very bad in many places as to reduce the average profit to 10s. a head; tho' in many places, not peculiar in soil, &c. it amounted to much more than double, I shall suppose, what might easily be effected, an increase of 7s. 6d. or

10,871,053

The whole management of swine is, in general, so execrable, that to suppose the profit increased one half, is a very moderate idea, or

1,254,352

£.23,464,447

£. 23,464,447

It was, I apprehend, clearly proved, that the number of horses was more than double the requisite strength ; but I shall suppose it only double ; that evil remedied, would make an addition of

3,902,430

£. 27,366,877

Now these improvements do not include near the whole circle of the farmer's business ; there are many other crops and points of management ; and the principal part of that of half the kingdom, viz. grass lands, that remain ; a very little improvement in these, would raise this sum to much above thirty millions *per annum* ; a noble increase of product, and which would be attended with consequences of the most important kind to every part of the nation.

But there is another field of improvement which demands attention in the strongest manner imaginable. It is the bringing into culture the vast tracks of waste lands that disgrace so many counties in this kingdom. I have, in divers parts of the preceding tour, given minutes of several improvements of moors (the worst sort

sort of all wastes) which prove, in the clearest manner, the great profit arising from such undertakings, amounting from fifteen to twenty *per cent.* on all the money laid out: It would lead me into too extensive a field for the present work, to calculate the additions to general product, that might, in this manner, be made; but they undoubtedly amount to many millions of money annually.

We should here remark, as we pass, that if increasing the product of the soil is a business of such uncommon consequence, it is worth some enquiry to discover the means of doing it: But such an important part of the domestic œconomy of a great nation requires a more minute attention than the compass of these papers will allow me. However, I shall mention one or two particulars, which are peculiarly connected with the minutes of this journey.

The proper rank of people to be addressed on such a subject is the landlords: It is they alone who can effect improvements; and one method I shall venture to recommend, is that of RAISING RENTS.

I have more than once heard some of the nobility and gentry, of great landed property, speak with pleasure of their rents not having been raised for many years; considering it as a point of their magnifi-

cence to live in the midst of tenants who are so greatly favoured. There cannot be an idea more pernicious to the public good. I know not an instance of rent being very low, and husbandry at the same time being good. Wherever such instances are to be found, we may be certain the farmer, in some way or other, pays a *real* rent, tho' not a nominal one; in marling, inclosing, or some expensive improvement. But innumerable are the instances of farmers living wretchedly, and even breaking, on farms at very low rents; and succeeded by others on the same land at very high ones, who make fortunes. If land is cheap, it will be *held* cheap. I have no doubt but if the best clay land in *England* was any where to be had at 6*d.* an acre in large quantities, but the culture of it would so much degenerate, as to be inferior to the poorest soils let at their value. We actually see this to be the fact wherever lands are to be had much under their value; for I have universally observed, that particular farms, which I have, in my journey, remarked to be most wretchedly managed, have, on enquiry, been found to be much under let; and I have often heard the same observation made by many gentlemen particularly attentive to these matters. But it is rare to see land very high let, badly

culti-

cultivated; indeed, the very circumstance of high rent is a cause of good husbandry; for without it the farmer must be ruined. They are very sensible, that when a great rent is paid, they must either gain good crops, or starve; and this general idea is so strong, as to make them uncommonly industrious; and to exert all their abilities in cultivating their farms in a masterly manner. When you see a man with three or four hundred pounds a year, with not more than as many acres for it; you may lay it down as a maxim, previous to walking over his farm, that it is well cultivated; that the arable lands are tolerably clean, well manured, drained, and yielding good crops; that the grass is well stocked with a good breed of cattle, and none of it over-run with rubbish. When men pay dearly for their farms, they learn to value land, and let none of it be lost. On the contrary, view the same land let much under the value, and twenty to one but the prospect is, in every respect, the reverse. One material point in such arrangement, is the sum of money used to stock farms; when the land is cheap, the farmer takes as much as he can possibly compass, and necessarily overtrades himself; but when it is very dear, he confines himself to a smaller quantity; knowing the price he has to pay for

it, he is fearful of having too great a sum go in rent; the consequence of which is, he is always master of his farm, and cultivates it the better: but he who takes as much land as possible, is sure to treat it like a sloven.

What is the reason that we see, in many of the moors in the north of *England*, so many great tracks of land lying absolutely waste, that are as well worth ten or fifteen shillings an acre, as one shilling is worth another? This results merely from its being in such plenty. If not an acre could be had under ten shillings, I have no doubt but amazing improvements would be the consequence. We see in *Northumberland* moor farms of many thousand acres, the moor parts of which do not let for above a shilling an acre; the farmers have such quantities of it, that they think it only worth taking a slovenly crop or two, and then let it graze itself; and without ever inclosing it. Can any one suppose this could ever be the case with land at ten shillings an acre? And yet it is an absolute fact, that most of these moors would pay admirable interest for a good and rational improvement, however poor a one they may yield for the present miserable mode of tilling. Soils that require a thorough improvement from the very inclosure, must have

have large sums of money appropriated to them; but the misfortune of the present management is, that the land, from its plentifulness, is held in so little estimation, that no farmer will think for a moment of employing large sums about it, unless he grasps at a whole county, and leaves it as wild as he found it.

For these reasons, no conduct can be so extremely prejudicial to the general interests of agriculture, as the suffering farms ever to remain underlet. No landlord should entertain such false ideas of magnificence, as to wound the very vitals of his country, in order to raise a mistaken reputation of grandeur: far from reflecting credit, it is undoubtedly a disgrace. True splendor, is to surround a mansion with an accurate and masterly cultivation. Were I possessed of a contiguous ten thousand a year, I would chuse to have my territory, and the *approach* to my dwelling, marked by the excellency of my tenants husbandry; I would have my farms distinguished from my neighbours, by their superior products; I should chuse to be able to boast, that an hundred acres of my soil were of more benefit to my country, than the same quantity of another's land: But most assuredly this would not be by leaving my farms at the old rent, but by raising them to their

real value. He who boasts of his cheap tenures, boasts of living in the midst of raggamuffin slovens; instead of spirited farmers. For the truth of these sentiments, I appeal to the experience of all those among the nobility and gentry, who have considerably raised their rents, whether the culture of their estates has not been much improved since their raising them. I must therefore be allowed to consider it as a maxim, that the first step to increasing the products of the soil, and consequently the general income, from which so many useful effects result, is to raise the rents of the kingdom to the real value of the land; which would be to raise nine tenths of *England*. As to other means of improvement, the bounds of this letter will not allow me to examine them; but much might be done by proper encouragements; by judicious leases; by transplantation of farmers and labourers; and, above all, by the government always keeping the products of the soil at an high price; which is done chiefly by a regular exportation; and a bounty at certain prices.

We have found, that part of the products of the soil dependant on husbandry, exclusive of woods, timber, parks, mines, fisheries, &c. to amount to above *eighty three millions per annum*; and with a few
 1521. M improve-

improvements, of a most easy nature, and extremely evident, might be augmented *thirty millions* more, besides any augmentation from breaking up waste lands. Now, the great importance of knowing the amount and nature of the general products of the soil, lies in its relation to supporting a share of the public revenue. It is always of use to know in what degree, a nation is flourishing or declining, which can only be done by discovering the proportion between the wants of the government and the ability of the nation to support them.

It has been of late the fashion among some of the numerous *divisions*, I cannot call them *parties*, into which public men have arranged themselves, to represent this country in a most deplorable situation; as overwhelmed with debts and expences, and unable to support the additions to them, which future events may render necessary. I am very far from pretending to be any politician, but I think it may be of some use to examine, if the rural part of political economy carries any appearance of such a decay, and unhappy situation.

The whole amount of the taxes paid by *Great Britain* (including *Wales*) amounts, according to the latest accounts, to ten millions; and if the charge of collecting is reckoned, at an average, at six *per cent*.

the total will be about 10,600,000 *l.* Supposing *England* pays of this 8,000,000 *l.* this sum is but thirteen *per cent.* upon the fifty four millions, the income of landlords, tenants, the clergy, and that part of the poor maintained by agriculture.

I will not assert that income ought to be taxed thirteen *per cent.* but I may venture to conclude, that this kingdom, in possession of such amazing branches of income, unconnected with the present enquiry, cannot be in any desperate situation, while the taxes exceed not thirteen *per cent.* of part of the income of agriculture alone.

The eighty three millions, the product of the husbandry (except as before excepted) we found to be expended as under:

Rent,	- - - - -	16,000,000
Tythe and rates,	- - - - -	6,566,666
Labour,	- - - - -	14,596,937
Draught cattle,	- - - - -	7,804,860
Wear and tear, and repairs,	- - - - -	8,473,848
Seed	- - - - -	4,875,308
Interest of money,	- - - - -	4,400,000
Profit of husbandry,	- - - - -	* 18,237,691

* These articles do not come to just the amount, because I called the *Expenditure* 65,000,000.

Sup-

Suppose the taxes paid by }
all *England* to be } £.8,000,000

Income of the soil, exclu- }
sive of manufactures, } 60,000,000

Deduct the taxes, - - - 8,000,000

52,000,000

I have given this table, under the supposition of the soil alone paying all taxes. It is thirteen *per cent*. But if woods, timber, parks, fisheries, and particularly mines were added, the sixty millions would be vastly increased, and the taxes consequently amount to much less *per cent*.

Viewing the taxes as a part of the expenditure of the soil, the following circumstances should be kept in mind.

The amount of product, as I before observed, is expended in two ways, which may be called *productive* and *barren* expences.

The first include all such as, in circulation, form new incomes; these are the rent, rates, tythe, labour; that part of wear and tear that consists in the workmanship of artisans; interest of money; and taxes; and the remainder, or farmer's profit. Taxes rank with these, because they form the income of those into whose pockets government makes them flow,

Barren

Barren expences, are such as produce no fresh income; such as the maintenance of horses; feed; and that part of wear and tear which is the purchase of rough materials.

And further; the expenditure of the productive division is to be divided in the same manner. Thus; a landlord receives 10,000 *l.* rent; he lays it out in rich furniture; fine cloaths; showy equipages; wines; brandy; tea; sugar; spices; horses; &c. Now the furniture, cloaths, and equipages are productive expences, because the principal part of their value forms fresh income; but all the other articles are *Barren*, because the value either consists not in labour, or in that of foreigners.

The same division is to be made in the expenditure of all the other branches of income. Taxes are to be divided in the same manner. The civil list; the pay of the army and navy; the building of ships; hospitals and bridges; the charges of levying; the interest of debts at home; are all productive articles, forming income: But a subsidy paid to a foreign power; the maintenance and pay of armies abroad; the interest of debts paid to foreigners; these are all *barren*.

Now in the above view of the whole expenditure; and in that of it subdivided;

Barren

it

it is extremely evident that the aggregate interest of the State receives no mischief from the productive expences, provided they do not destroy industry. Thus, a landlord's raising his rents, we have shewn to be beneficial; but if he raises them so enormously that no farmer can hire of him, then his estate becomes waste, and the nation is injured. It would be the same with tithes, were they levied in a proper manner; but being multipliable on industry, they are pernicious. The poor rates are a productive expence; but injurious, in encouraging idleness. The interest of money is nothing but a change of income. Taxes, if expended productively, are the same; they are collected from all the other heads; some of them are the poorer; but then the people, to whom they are paid, are the richer; and as long as the income exists, it matters not to the State whether it is in one hand or in another, as the industrious will necessarily possess the greatest share.

Those who assert that this kingdom is ruined by taxes, seem not to understand the nature of taxes. Suppose eight millions paid by sixty millions of income; are we to suppose that the body of the people are poorer by eight millions? Are we even to suppose that the possessors of the sixty millions

millions of income are poorer by the whole amount? Certainly not. These eight millions create an income for King; soldiers; sailors; ship-builders; tax-gatherers; stock-holders, &c. This body, in a political view, carry the same appearance as the possessors of the sixty millions from whom their income is taken. It only divides that sum among a greater number of people; the whole remains income as before, only it is possessed by *John*, *Tom*, and *Harry*, instead of *John* and *Tom*; and *Harry*, with his new created income, consumes as great a proportion of taxed commodities as *John* and *Tom*; and consequently immediately bears his share of all future taxes. But this shews the great consequence of spending the amount of taxes at home. All that are paid to foreigners, such as subsidies and interest of debts, &c. bear no share in future levies.

While taxes are principally laid on consumption, as they are in *Britain*, and consequently not burthensome to industry, it is impossible to conjecture to what amount they may be carried; always supposing them expended at home. But as to the absurdity of expecting ruin from them; or that we shall not *be able* to support our government with that vigour which future exigencies may require, *on account of our heavy*

heavy taxes, appear to be groundless apprehensions.

But here I am asked, if the misery under which husbandry groans in *France*, and some other countries, looks like any such innocence in taxes? I answer, that *Great Britain*, by the best accounts we have, is higher taxed than *France*; and *Holland* higher than either. It is not taxes that oppress *France*; but arbitrary power; which destroys industry, from insecurity of possession; and by unequal and irregular taxes. The *taille* in *France* raises about two millions sterling: It is not the payment of that sum which burthens so great a kingdom; but *the manner in which it is raised*. A tax multipliable on live stock and improvements that raises a million, is more burthensome than others on consumption that raise six times the sum. The taxes paid by *Holland* are immense, but yet the *Dutch* are a rich and flourishing people.

In the above table we find, that the tythes of *England* amount to above 5,500,000 *l*. This is the great burthen that keeps down the products of the soil; that checks improvement; and that causes the languor in agriculture, wherever it is found. The total of products had much better pay twelve millions to the government by taxes on consumption, than five to the clergy in tythes.

tythes. — This tax is the *taille* of *England*.

The article draught cattle amounts to near eight millions; that is, it is equal to the aggregate of *English* taxes. This being an absolute barren expence is no comparison more burthenfome than the taxes which are a productive expence. The reader will excuse my supposing all taxes paid by the soil alone.

But the burthen of taxes, say others, does not lie upon our trade and manufactures only to their own amount. The evil extends to the advances made by every hand that pays a tax, until the accumulated weight of all falls upon the consumer. But what then? This addition to taxes is not the annihilation of so much income; it is rather a creation of new: It takes money out of the pockets of consumers. But what is done with it? Why, it is put into the purses of the industrious, who will create fresh income with it. Where is the harm of this? Too much cannot flow into those coffers that are emptied for the advancement and increase of industry.

I have proved, that if the number of draught cattle was no greater than necessary, it would be an addition to product of very near four millions; or one half of the amount of taxes.

Improving

Improving the breed of sheep, in a moderate degree, would be attended with an addition of above ten millions; and yet we are told that this nation is half ruined by weight of taxes.

These, and a few other improvements, none extravagant or improbable, and exclusive of the cultivation of waste lands, would yield an addition to product of THIRTY MILLIONS. If tythes were rendered a permanent tax, it would add five more, at the lowest possible computation. With such an improveable estate we are taught to tremble at eight millions in taxes *!

But let us, for a moment, enlarge the sphere of our discourse, and take a transient view of the whole kingdom.

AGRICULTURE.

The income we have from	}	60,000,000
products specified amount		
to	}	6,000,000
Suppose woods, timber,		
inland fisheries, parks,		
mines of all sorts, yield a		
product of		

66,000,000

* Creating a new income, is enabling the nation to pay nearly the total of the addition, in taxes: As extravagant as the *fact* would be, yet the *ability* is the same, and undoubted.

M A N U -

MANUFACTURES.

The average of five accounts }
 now before me, makes }
 the value of the labour } £. 7,000,000
 added to our wool to a-
 mount to

The labour bestowed on }
 leather, exclusive of the }
 consumption in the arti- }
 cle wear and tear in hus- }
 bandry, consisting of } 4,000,000
 shoes, breeches, coaches,
 chairs, harness, &c. &c.
 &c. Suppose

The manufactures of lead, }
 tin, iron, copper, &c. }
 is one of the first, if not }
 the greatest in the king- } 6,000,000
 dom. Suppose the labour
 is

Flax and hemp, glass, pa- }
 per, and porcelaine. Sup- } 2,000,000
 pose

Silk and cotton must be con- }
 siderably more than } 1,500,000

20,500,000

Besides

Besides these articles there are all the earnings of the whole body of artificers that are scattered, (except in the hard-ware way) such as carpenters, masons, cabinet-makers, upholsterers, glaziers, &c. &c. with an infinite number of shopkeepers: The whole aggregate of labour, exclusive of the preceding manufacturers, must be prodigiously great: However, that we may not exaggerate, let us suppose it, including all trades, not before specified, at

£. 6,500,000

27,000,000

COMMERCE.

The amount of the income arising from commerce, can only be conjectured: But when we consider that it includes that, not only of the merchants, but also of all the numerous bodies employed by

them, such as sailors, ship-builders, boatmen, writers, porters, servants, with a vast number of *&cetera's*, it must certainly be very considerable, suppose

£.10,000,000

The public revenue, exclusive of the interest paid to foreigners

9,000,000

The interest of the savings in agriculture, manufactures, and commerce, exclusive of the public funds, which are included in the last article; and the sums borrowed by farmers; such as mortgages, bond-debts, *&c. &c.* *&c.* Suppose

5,000,000

Law, physic, the fine arts, literature, *&c. &c.* cannot create an income of less than

5,000,000

RECA-

RECAPITULATION.

The soil,	-	66,000,000
Manufactures,	-	27,000,000
Commerce,	-	10,000,000
Publick revenue,	-	9,000,000
Sums at interest,	-	5,000,000
Law, physic, &c.	-	5,000,000

Total income of *England*, 122,000,000

Now the most inattentive eye must be able, at the slightest glance, to specify abundance of various kinds of income omitted in this table; but I by no means aim at an accuracy in a matter that requires it not: All I would endeavour to show, is, that the income of the whole people is a very great sum, compared to all public wants; and that it, in all probability, amounts to considerably more than an hundred millions.

Now can any one with reason assert, that this income is too small for the levy of such taxes as may be requisite for the public service? Is there any reason for the melancholy representations of this kingdom, which we have heard and read of late? Have we reason to dread a just naval war with any of the potentates of the world? Does this short and unexaggerated

picture tell us, that we should submit to injury and contempt, rather than engage in measures for which we cannot find the supplies?

But it is said, that all these are ideas, visions; figures; calculations; mere paper and packthread; not facts. It is true, in this general view I have dealt in suppositions; but I draw them from clear and indisputable facts: I may have erred in many particulars, but the probable errors are not on the exaggerated side; all these incomes undoubtedly exist, and must amount to vast sums, tho' not precisely those which I have minutely: However, the most common observation confirms the general truth of these calculations. Throw your eye around the sphere of agriculture, manufactures, commerce, and general expence; does not the view present a picture of a rich and flourishing state? Does not each class of the people find money for all purposes? Are not the amazing expences of the age common topics of conversation? And certainly expence does not exist without income. View the improvements of husbandry everywhere carried on: See the buildings, the palaces I might say, erected in almost every village of the kingdom: Who wants money when a park is to be ornamented, temples to be raised, or valleys floated with water?

water? View the navigations, the roads, the harbours, and all other public works: Take notice of the spirit with which manufactures are carried on. What part of the commerce of this kingdom feels a languor that speaks a general decay? Move your eye on which side you will, you behold nothing but great riches, or yet greater resources. To what corner we must fly to seek the signs of a declining state, I know not. In every part where I have been, I have seen nothing but the strongest marks of a rich, a happy, and a flourishing people. If such an united effect does not tend powerfully to confirm the truth and moderation of the preceding estimates, I know nothing that can. Nor let it be forgotten, that out of three kingdoms and a considerable principality, I have confined myself to *England* alone.

It is true, clouds will sometimes obscure the brightest hemisphere: Government, in a free country, cannot be without its difficulties: Money will be wanting, when millions might be had: We must sometimes hear of taxes on plate and chip-hats.

Nor must we be surprized when we are, with much gravity, informed, that we are to become tributary to *France*; that another war will be our ruin; that supplies

can never be raised; that men will not be found; and that debts and taxes are our ruin. All this is but a repetition of what we have heard these fourscore years. What a constitution must this state have, to belye the predictions of so many physicians, for so many years*!

* Many very sensible and uncontroverted reasonings, as well as facts, have been used in declamations against debts and taxes; but visionary ideas of a perfect conduct are not the enquiry, unless it is proved that our enemies in *Europe* are happy in the practice of such a conduct: For when we are told that our debts and taxes are to enslave us to *France*, it seems to be forgotten, that our neighbour has her debts and taxes as well as ourselves; and is yet more oppressed by them.

When we are told, that it would be impossible to find men or money for another war, it reminds me of the state of *Britain* in 1749. Had any man, at the termination of that war, predicted that another would ensue in five years, in which this country would expend above an hundred millions of money; add seventy five millions to her debt; and keep, for several years, above four hundred thousand men in pay; that she would do all this, and increase, during the whole period, in income, power, and wealth; and remain at the conclusion of it, in a most flourishing situation: Had any man, I say, dared to conceive such an idea, would he not have been treated as a fool or a mad man?

The resources of so free, rich, and industrious a nation are so amazingly great, that I think there is no reason to apprehend any future administration, possessing the affection and confidence of the people, being

The greatest disgrace to a kingdom, so truly flourishing, is the existence of so much waste land : I most sincerely wish to see a fund of money raised for the improvement of it : I would undertake to sketch a plan, that should not easily fail of most beneficial effects ; and give my weak assist-

ing at a loss for a future hundred millions; or for armies and navies of an hundred thousand strong in every quarter of the globe.

But government certainly should not trust to chance in matters of such great import: Domestic improvement should enlarge our resources: I have before proved, that some points, of no difficulty to effect, would add an income to the soil of thirty millions a year. A million a year, expended in the improvement of waste land, during the continuance of this peace, would more than compensate an expence of *ten per annum* in a future war; provided they were not expended among foreigners. In answer to such proposals, we are told of the necessity of public oeconomy: But I will venture to assert, that there is not so great a curse to the nation as this boasted oeconomy. I suppose it is this paltry oeconomy that prevents us from seeing among the supplies, *For the improvement of waste lands,* 100,000*l.*

Would it be a breach of oeconomy in our ministers to direct a vote of that nature every year; beginning with 10,000*l.* and rising according to the success; the rental of the improved land to be paid into the treasury, and remain at the disposition of parliament. I shall some time or other enlarge upon this idea. It might perhaps be executed without the complication or expence of a *board of agriculture,*

ance in the execution of any part of it *. If a subject so very obscure as I am, might venture to drop a hint to his Sovereign, I should think the improvement of the uncultivated crown lands an object highly worthy of his Majesty's royal attention.

Two points remain to speak to; first, it is asserted, by those who would have us to

* *Enfield Chace* is so often the object of my view, that it would be surprising if I had not reflected on the improvement of it. A very slight sketch is sufficient to point out the expediency of improving such wastes.

The inclosure of a square mile of 640 acres, (as in Plate iv. Fig. 1. Vol. II.) contains eight miles of hedging, or 2560 perches, which I calculate as follows,
Ditch, 1s. 6d. Quick 6d. Dead-hedge,
1s. In all, 3s.

Ten gates,	20
Buildings. — House,	£ 300
Barn,	150
Stable,	80
Cow-house,	50
Hog-sties,	50
Grainery,	50
Sundry pailing, &c.	30
	710

That Chace is extremely woody: But the grubbing would not near amount to the value of the stuff, however, I allow for hollow ditching, the wet parts to be filled with part of the bushes: — and part of the grubbing,

believe the kingdom in a most deplorable situation, that those very riches, boasted of by others, with the numerous taxes that form the public revenue, raise the price of provisions so greatly, that labour is consequently raised, to the decline of our manufactures, and foreign commerce.

A very few facts will suffice clearly to answer this common place objection. The

Interest of that sum at four <i>per cent.</i>	£. 125
Permanent rent to be paid his Majesty, 5 <i>s.</i> } per acre,	160
	285
Tythe free, this land would, in such excellent order, both with respect to the soil, buildings, and inclosure, let readily for 20 <i>s.</i> an acre; (I would give that rent myself;) } however, I shall suppose only 18 <i>s.</i> }	572
Deduct as above,	285
Clear profit, being 9 <i>l.</i> 4 <i>s.</i> <i>per cent.</i> interest } of capital, and rent paid	287

Suppose the chace contains ten thousand acres, the clear profit on the improvement would be 4484*l.* *per annum* clear. Consequently it would to his Majesty be 6984*l.* *per annum*, Interest of capital employed in both cases paid,

When you come to apply figures to this, and proportion it to larger undertakings, it will appear that the improvement of waste land (to whoever belonging) is an object highly worthy the attention of the legislature.

I would undertake to realize this calculation on any waste land in *England*; and I hope one day to prove incontestibly, that the improvement of our wastes would provide a fund sufficient to pay off the national debt in a moderate number of years, or remain applicable to any purpose which the legislature thought more important.

price

price of provisions *is not* raised in any part of the kingdom, to an unreasonable or dangerous height: This fact has been proved too clearly, in the preceding minutes, to admit of a moment's doubt. The prices of all the necessaries of life throughout *England* are moderate, and, in our dearest times, have not equalled the common prices in the markets of *Holland*, the most commercial country in the world. I do not instance this as a proof of our flourishing situation, for reasons too complicated to be mentioned here; I think it rather a proof, that instead of declining, we may hope yet to make great advances.

In the next place I assert, upon the testimony of some hundred facts contained in the preceding papers, that supposing this *HIGH* price of provisions was true, yet that it proves nothing relative to the price of labour. In places where provisions are very high, labour is uncommonly cheap: In others, where labour is extravagantly dear, provisions are found to be very moderate. When I have such clear and decisive facts for my guide, I pay no regard to the common-place *reasonings* of speculative politicians.

But these writers tell us further, that the price of labour has arose so high among our manufacturers, that foreigners beat us out

out of most articles of trade, by under-selling us. This, by the way, is a mere assertion, but never proved: The intelligence I received, at our principal manufacturing towns, was directly contrary: All the master manufacturers I talked with assured me, they undersold the *French* at every market they met; this was particularly the case with those at *Manchester*, and also at *Sheffield*, *Birmingham*, *Leeds*, &c. &c. And, to recur from such particular information to historic facts; Do we not know that the *French*, in those trades in which they rival us, have done it merely by their intrigue, and family alliances between crowned heads, than fairly under-selling us? This has been the case, in one instance, at *Constantinople*; and in the other, in *Spain*. But reason would surely tell us, that this must necessarily be the fact: Can it be supposed that a nation like the *French*, that have been drove artificially to manufactures; that are subject to arbitrary power; among whom trade and manufacture are a disgrace; but never open to the same honour and consequence as the noblesse; professing the catholique religion; and having been long on the decline in all points of manufacture, according to the best accounts among them: Is it consistent with reason, that such a people should ever make

make the progress in manufactures that we have done: It is impossible: And the facts before advanced prove it. It is not the daily pay of a workman that is to be taken as a criterion, but the quantity of work performed in the same manner, for a given sum of money: Half a crown a day may certainly be cheaper wages than one shilling.

Secondly, it is asserted by these writers, who affect to run down our affairs, that, rich as we are, our population has suffered, that we have lost a million and half of people since the Revolution, and that we are at present declining in numbers.

To enter into a particular examination of these points, to answer the spirit of the argument step by step, would exceed the bounds of this letter; I shall therefore only venture a few remarks on the subject in general: if they are just, the ideas of these writers must be false.

I purposely omitted speaking of population before; because I conceived it to be only a secondary object, and dependent upon others.

When we speak of the interest of individuals, the populousness of a country has nothing to do with the enquiry: A man and his family may be fed and clothed as well, and live as happy, in a country that

that contains but five millions of inhabitants, as in one that contains twenty millions. The only respect in which great numbers of people are of consequence, is relative to the collective interests; those of the State.

All public works, and public employments, require men for the execution; and population should flourish sufficiently for affording such assistance, without injuring the economy of agriculture, manufactures, commerce, or any useful profession in the nation. I have before proved the nation to be in the possession of a vast income, highly sufficient for all demands, to possess a vigorous agriculture, flourishing manufactures, and an extended commerce, in a word, to be a great industrious country. Now I conceive that it is impossible to prove such points, without proportionably proving the kingdom to be a populous one. Riches and population, I apprehend, will eternally be found synonymous terms; for I have no conception of riches any where abounding, without numbers of people.

It is certainly a fact, that men have never been wanting in this country when money was at command, either for foreign wars, or domestic improvement, nor do I remember reading any such case in history.

Some

Some politicians, from very fallacious materials, published, before the last war, accounts of the progress of population in this kingdom, in which they attempted to prove, that we had lost above a million of souls since the Revolution : That war succeeded ; they saw near half a million of men taken into the pay of the public ; they saw, at the same time, an agriculture more flourishing than had ever been known before ; they saw our manufactures carried on with more spirit than any preceding period could boast ; they beheld the commerce of *Britain* extended to a degree almost inconceivable. At the same time that agriculture, manufactures, and commerce made such strides, that the public service reckoned her men by hundreds of thousands ; they saw all kinds of public and private undertakings conducted with a spirit unknown before ; they viewed turnpikes, inclosures, and navigations, making, on every side ; harbours opening where scarcely boats had sailed before ; fortifications erecting in every quarter ; every city, town, and village in *Britain* receiving additions to her buildings ; in a word, all the marks of an amazing system of employment, which seemed to call for fresh millions of people, to supply such immense demands. Surely these facts ought to have taught them a better

better system of politics, and convinced them of the utter impossibility of a nation's declining in population, that made such immense efforts, without her domestic œconomy receiving the most transient wound.

But to our amazement be it spoken, other writers, who have seen all this, or might have seen it, have since repeated the same tale, and gravely inform us of the millions we have lost; learnedly preaching upon the sad consequences of depopulation. It is in vain to talk of tables of births, and lists of houses and windows, as proofs of our loss of people; the flourishing state of our agriculture, our manufactures, and commerce, with our general wealth, prove the contrary beyond the power of any such vouchers to invalidate their testimony.

During the course of the last war, and since, not a session of parliament has passed without numerous acts for inclosures, turn-pikes, and navigations. We have, in every county of the kingdom, seen these works carried on with unabated spirit, at the same time that all other demands for men are fully satisfied. It has been, however, complained, that a want of hands has been felt in agriculture, in several parts of the kingdom: This information I received more than once during my tour: I never failed

failed to make minute enquiries into the real state of the case, and always gained the satisfaction I sought.

I found the want of hands complained of, was relative to nothing more than price: Labour was sometimes unusually dear, which occasioned an unusual clamour: But as to any work that ever stood still for want of hands, when the money requisite was ready, I could no where discover a single instance.

In some parts, where I made these enquiries, I found many causes conspired to render hands scarce; turnpikes, navigations, drainages, and inclosures, all at once had operated, with the war, to distress the farmer; I nevertheless could not discover one instance of any necessary work in husbandry standing still for want of hands; no field unploughed; none unscaped; no barn of corn unthrashed. At the same time, I conversed with many gentlemen upon their buildings and improvements; and I never found one that wished to form a water; improve a park; or to execute any great work, that ever dreamt of a want of hands: the cash was the only object.

At certain seasons of the year, a man may certainly want to lay out, in a hurry, forty or fifty pounds extraordinary, without being able; but that proves nothing:

It

It

It is an employment of some regularity and continuance that attracts hands in spite of all obstacles. I was a farmer myself, during the war, as well as at present; and have often heard of these complaints among my neighbours, at the very time that I could have procured hundreds of men for 2*d.* extra *per* day.

These, it is true, are facts, but reason tells us that it would be miraculous, were the case otherwise. It is employment that creates population; there is not an instance in the whole globe of an idle people being numerous, in proportion to their territory; but, on the contrary, all industrious countries are populous, and proportionably to the degree of their industry. When employment is plentiful, and time of value, families are not burthens. The father, mother, and most of the children apply themselves to labour, and earn such a competency, that laziness is the only road to poverty. Marriages are early and numerous, in proportion to the amount of employment. The great point is to keep it on the increase, however slowly, for then industrious population will always be active. In a great kingdom there must always be hands that are either idle, backward in the age of work, unmarried for fear of having families, or industrious only to a certain de-

gree. Now an increase of employment raises wages, and high wages changes the case with all these hands; the idle are converted to industry; the young come early to work; the unmarried are no longer fearful of families; and the formerly industrious become so in a much greater degree. It is an absolute impossibility that, in such circumstances, the people should not increase; great numbers being carried off by war, or otherwise, matters nothing; it is rather a spur to the industry of the remainder; for the greater the consumption of hands, the greater the demand for industry; and that demand can never exist without a proportionable increase of population in consequence of it.

But still, say these writers, we are not so populous as at the Revolution. Now supposing all I have replied is false; supposing that agriculture, arts, manufactures, and commerce, have made vast advances; supposing that the whole kingdom is adorned, and every enjoyment of life increased; suppose all this has been regularly the destruction of population; and that we have lost a million and half of people; yet I answer, that this loss is no otherwise an evil than being the sign of a decay in general prosperity. What are the hands that it is possible we should have lost? Many of these writers allow
(indeed

(Indeed they cannot possibly deny) the increase of agriculture, manufactures, and commerce; consequently we cannot have lost any industrious hands: They must have been on the increase. It is equally impossible that the rich classes can have decreased, because, if those professions which yield riches have been augmented, it would be strange indeed if that class was fallen off. Besides, the old taxes on consumption, that continue to the present time; the rise of rents; the creation of new income; as well as universal opinion, confirm this remark. The loss in population must, therefore, have been only in the idle poor, or, in other words, the loss of those only that were burthensome. No nation is rich or powerful by means of mere numbers of people; it is the industrious alone, that constitute a kingdom's strength.

Those who urge the consequence of indiscriminate population, should take a view of many of our present numbers; and try to conceive the use of them. Do they think that beggars; vagrants; gypsies; thieves; pickpockets; and all that blessed population, that fill our goals and furnish *Tyburn*, to be of utility to the State? These are the scum of the non-industrious poor: All of whom are a burthen, without repaying the loss by breeding useful hands,

or causing any circulation of industry. Industrious hands are not bred by the idle; and the share which this class bears of our taxes is contemptible. The number of them is very great, and when wages are low it increases: High wages lessens it, in tempting those to work, who otherwise would not touch a tool. When therefore it is said the nation is populous, let this class be struck out of the question; the only people that should come into the account are, the rich, and the industrious. There are many politicians who would harangue much on the benefit of *England's* containing ten millions of souls, without enquiring whether five were not non-industrious. There is no doubt but this country may be more populous in every respect that concerns wealth; power; and general prosperity, with only six millions, than in some cases with ten.

Tell me of a kingdom, state, or prince, that has many millions of subjects: This decides nothing; tell me of one that is immensely rich, no other enquiry is requisite; he must have men. No fear can be more vain, than that of an industrious wealthy kingdom wanting subjects. Let this nation continue to encourage and honour agriculture, manufactures, and commerce; to be rich in the possession of great wealth
from

from a vast stock of industry ; let her see to these points, and she need not be concerned about the number of her people. Population will take care of itself. If you think you have not people enough, make more, which is as easily done as to manufacture a statue : Provide new employment, and new hands will inevitably follow. An act of Parliament to raise money for the improvement of a million of waste acres, would increase population more than twenty score of naturalization bills.

I think there is no slight reason to apprehend, that the number of the people, as commonly received at present, is mistaken ; it is thought to amount, by some, to not more than five millions ; and by others, six, in *England* and *Wales*.

The only method hitherto taken to discover the number, has been by calculating six to a house : The houses are very near a million. But this idea I have the greatest reason to believe erroneous. From a variety of enquiries, and particular observation, I should conceive the number more consonant with eight or nine millions of people, or eight or nine to a house ; the mere foundation for supposing it six, is the calculation that a marriage gives two adults and two young children at once : But the point of marriage has little to do with it, unless the

number of houses was regulated by it; which is far enough from being the case. The only just rule is, to gain the average of souls that inhabit a house, from the King's palace to the lowest cottage. Now in this view, without troubling ourselves about marriages, is it conceivable that the average can be so low as six? Cottages are, in general, the habitation of labourers, who all swarm with children; and many have double, treble, and even quadruple families. And in most parishes view the *parish cottages*, with dozens of families in them: Reflect upon the vast number of houses in towns, where poor families occupy only a floor; where every one, from the cellar to the garret, has each a family; and in all these cases it will be found, that the actual resident number will be much higher than six, or probably eight, without reckoning sons or daughters, that are absent in service. Then rise to the next ranks, farmers, with houses full of children and servants; and in towns, small shops, with their one or two maids and a lad; until, rising, you come from ten to forty, fifty, and an hundred in an house.

It is astonishing that our political arithmeticians should have been so blind as to imagine, that *house* was merely a synonymous word for *marriage*. The latter is a calcu-

calculation that cannot possibly give the truth; but the number of houses is certainly a good rule to judge by. However, we should not be too ready to suppose the number of souls *per* house, at all times the same. Houses are much enlarged within fifty years; and among the poor, more families may be reckoned to a certain number of houses at present, than formerly. The exact number of houses in 1758, was 961,578; but if we consider the vast progress which every art and trade has made, from the inundation of wealth after the war, and which we see in the increase of towns and villages, within the last ten years, there can be little doubt of the number now amounting to a million. Suppose population is in the proportion of seven families at six souls to five houses, the number in *England* and *Wales* will then be 8,400,000.

Six houses giving nine families, the number is 9,000,000.

Five giving eight, it is 9,600,000.

Whatever number is fixed on, there is the greatest reason to believe, that the total is much more considerable than the common notion makes it.

According to the minutes of this tour, the number employed by agriculture alone,

O o 4

that

that is, of farmers, servants and labourers, amount in *England* to 2,800,000 souls.

The number of landlords, and their families and dependents, including all those employed by woods, timber, fisheries, and mines of all sorts, cannot be estimated at less than 800,000.

According to the preceding estimation, the labour bestowed on manufactures amounts to £.27,000,000; but as this is exclusive of all the wear and tear of husbandry &c. it may here be called thirty millions. Sir *Mathew Decker*, in his *Causes of the decline of foreign trade*, calculates the manufactures of silk to earn upon an average 6*l.* a head *per annum*: But that calculation would be too low at present for all our manufactures; 8*l.* would possibly be about the mark, as such numbers of children are employed in most; but suppose we call the amount 10*l.* this will make the number of people employed in manufactures 3,000,000*.

The commerce of *England* in all its extent, both foreign and domestic; and including all the families, servants, &c. of

* The ingenious Mr. *Anderson* computes the number employed by wool alone at 1,500,000. And that the plantations, exclusive of sailors, maintain a million of people at home.

this whole class, must amount to more than 700,000 souls.

The non-industrious poor have alone been estimated at a million of souls; but I shall suppose them only 500,000.

The clergy, lawyers, physicians, professors of the arts, &c. &c. &c. may be estimated at 200,000.

The number maintained by the public revenue must be very great. Army, navy, public offices, stock-holders, tax gatherers, &c. &c. cannot be estimated, with their families, servants, &c. at less than 500,000.

RECAPITULATION.

Agriculture, - - - -	2,800,000
Landlords mines, &c. -	800,000
Manufactures, - - - -	3,000,000
Commerce, - - - -	700,000
Non-industrious poor, - -	500,000
Clergy, law, &c. &c. - -	200,000
By public revenue, - - -	500,000
	8,500,000

Let it not be imagined that I offer such a table as probably accurate. I would only wish those who consider these matters, would reflect on the numerous professions
left

left out of this table, and then determine whether there is not a probability of the people of *England* amounting to nine millions. There are many other reasons for this supposition.

Sir *W. Petty* calculated the number in *England* and *Wales* at 7,400,000, in 1682; and *Davenant*, in 1692, makes them 8,000,000. Now I have already endeavoured to shew, that there is the greatest probability imaginable to suppose the number increased since that time; nor can such increase be supposed less than this difference.

I have ventured this slight sketch rather as an inducement for others to examine it it with more attention, than an accurate idea.

* * * * *

From this review of the agriculture, &c. of this kingdom, I apprehend there is no slight reason to conclude, that *England* is, at present, in a most rich and flourishing situation; that her agriculture is, upon the whole, good and spirited, and every day improving; that her industrious poor are well fed, cloathed, and lodged, and at reasonable rates of expence; the prices of
all

all the necessaries of life being moderate; that our population is consequently increasing; that the price of labour is in general high; of itself one of the strongest symptoms of political health; but at the same time not so high as to leave any reason to fear those ill effects which have been prognosticated concerning it; that the wealth of all other ranks of people appear to be very great, from the almost universal manner in which the kingdom is adorned with stately as well as useful buildings, ornamented parks, lawns, plantations, waters, &c. which all speak a wealth and happiness not easily mistaken: That all kinds of public works shew the public to be rich; witness the navigations, roads, and public edifices. If these circumstances do not combine to prove a kingdom to be flourishing, I must confess myself totally in the dark.

This conclusion, I am sensible, will by no means render my undertaking popular. The generality of readers are seldom so well pleased, as when an author lays before them a melancholy picture of accumulated evils under which a nation groans: This is not to be wondered at; it is human nature. But I conceive it a duty incumbent on one, who engages in such a journey as this, to lay a fair and genuine account of
all

all these matters before the public. I have, it is true, offered some reflections on them; perhaps it was an error, and I should have dealt only in facts; but these reflections do not alter those facts, which may be viewed naked, and applied to any use more penetrating minds can make of them.

The idea of proportioning the particulars of this Tour to the whole kingdom, may not be satisfactory to all my readers; but perhaps there is some utility in knowing such proportions; for although the whole was drawn into one view, and all from facts, yet there is possibly a use in knowing what the state of the kingdom would be if all was like *Northumberland*; or all like *Middlesex*. We should surely learn from such estimates, some very powerful lessons of the value of industry and riches.

But further; many circumstances may prevent my extending these Tours to the whole kingdom; I cannot do it without that general encouragement which consists in information; and if the whole is not travelled, the proportion I offer in these sheets will, I apprehend, be found more satisfactory than those random guesses with which we have hitherto been amused.

LET

LETTER XLIII.

YOU will now allow me to take my leave, and finish this long correspondence with a few scattered matters not included in the preceding review.

R O A D S.

To *Stevenage*. Turnpike. Very good.

To *Luton*. Cross. Execrable.

To *Dunstable*. Cross. Very indifferent.

To *Wooburn*. Turnpike. Good.

To *Newport-Pagnel*. Turnpike. Middling.

To *Bedford*. Turnpike. A vile narrow cut up lane.

To *Northill*. Cross. An excellent road, much superior to many turnpikes. It is thrown up in the better sort of turnpike method.

To *St. Neot's*, by *Sandy*. To the latter cross; the rest turnpike. Good.

To *Kimbolton*. Turnpike. Very shabby.

To *Thrapston*. Cross. But so, so; much cut up.

To *Stamford*, by *Oundle*. Good.

To *Grimsthorpe*. Cross. Very bad; and one part of it over a common with roads pointing nine ways at once, but no direction-post.

To

To *Coltsworth*. Turnpike. Most execrably vile; a narrow causeway, cut into ruts that threaten to swallow one up.

To *Grantham*. Turnpike. Very good.

To *Belvoir Castle*. Cross. Intolerably bad.

To *Cold Harbour*. Cross. A cut-up common.

To *Newark*. Turnpike. Good.

To *Scarthing Moor*. Ditto. Ditto.

To *Bawtry*. Ditto. Very sandy over *Shirewood* forest.

To *Doncaster*. Turnpike. Part sandy, but tolerable.

To *Rotherham*. Ditto. Hilly; but pretty good.

To *Sheffield*. Ditto. Rough and stony; bad.

To *Wentworth Castle*. Ditto. Hilly; but good.

To *Wakefield*. Ditto. But indifferent; through the town of *Wakefield* so bad, that it ought to be indicted.

To *Leeds*. Ditto. Pretty good.

To *Tadcaster*. Ditto. Good.

To *York*. Ditto. Ditto.

To *Barnby Moor*. Ditto. Excellent.

To *Market Weighton*. Ditto. Ditto.

To *Beverley*. Ditto. Ditto.

To *Hull*. Ditto. Ditto.

From

From *Yark* to *Stillingfleet*. Cross. Good.

From *Risby* to *Routh*. Turnpike. Good.

To *Cave*. Cross. Bad.

To *Howden* and *Doncaster*. Cross. Bad.

To *Wentworth House*. Turnpike. Good.

To *Kiveton*, by *Rotherham*. Turnpike.

Good.

To *Workshop*. Turnpike. Pretty good.

To *Welbeck*. Through the Park.

To *Doncaster*. Turnpike. Pretty good.

To *Pontefract*. Cross. Indifferent.

To *Medley*. Ditto. A line of vile deep rutts cut into the clay; fit for nothing but carts.

To *Temple Newsam*. Ditto. Worse; these roads are a disgrace to the whole country.

To *Ferrybridge*. Turnpike. Rough; middling.

To *Howden*, by *Snaitb*. Cross. Indifferent.

From *Beverley* to *Driffeld*. Turnpike.

Most excellent. Firmly made, of good gravel; free from rutts and loose stones, and of a proper breadth.

To *Burlington*. Cross. Bad.

To *Scarborough*. Ditto. Ditto.

To *Malton*. Turnpike. Tolerably good.

To *Castle Howard*. Infamous. I was near being swallowed up in a slough.

To *East Newton*. Cross. Exceeding bad.

To

To *Duncomb* Park, by *Kirby*, &c. Cross; and very bad, except through Mr. *Duncomb's* estate, which is made by himself, and incomparably well. A most admirable road.

From *Newton* to *Stokesley*, in *Cleveland*. Cross; and execrably bad. You are obliged to cross the Moors they call *Black Hambleton*, over which the road runs in narrow hollows that admit a south country chaise with such difficulty, that I reckon this part of the journey made at the hazard of my neck. The going down into *Cleveland* is beyond all description terrible; for you go thro' such steep, rough, narrow, rocky precipices, that I would sincerely advise any friend to go an hundred miles about to escape it. The name of this pass is very judicious, *Scarth-neck*, that is, *scare nick*, or frighten the devil.

To *Kirkleatham*. Cross. This road is a rare instance of the public spirit of the gentlemen of *Cleveland*, who determined not only to convert the worst roads in *England* into good ones, but to effect it without the least tax upon the traveller. They are doing it by subscription. It was
set

set on foot, and greatly promoted,
by *Charles Turner*, esquire.

To Schorton. Cross. From *Kirkleatham* to the great *Northallerton* road, is excessive deep; from thence to *Schorton* middling.

To Richmond. Turnpike. Pretty good.

To Greta Bridge. Ditto. Very rough, and broken.

To Bowes. Ditto. Middling.

To Bernard Castle. Ditto. Good.

To Fall of Tees. Cross. Very bad.

To Brough. Turnpike. This road runs across *Stainmore*, and is a most excellent one; firm, dry, level, and free from loose stones.

To Askrig. Cross. It runs over the mountains, and is fit only for a goat to travel.

To Reeth and Richmond. Cross. Good; owing to the spirited conduct of *Charles Turner*, esq; when he lived at *Clintz*.

To Kiplin. Cross. The best part of this road is from *Schorton* to *Kiplin*, which is much superior to most of the turnpikes in this country, and owing to the spirited conduct of *Christopher Crowe*, esq; who, in the capacity of a Justice of the peace, has given much attention to roads.

To Swinton. Cross. Good. The roads around *Swinton*, the seat of *William Danby*, esq; are all excellent, that gentleman making and mending with incomparable spirit. Thro' his own parishes he makes himself; and bribes the others; he has either made, or contributed to, above twenty miles of road.

To Craikbill. Cross. Good.

To Slenningsford. Cross. Excessive bad; lanes all the way.

To Danby. Cross. Part good, and part middling.

To Asgarth Foss. Cross. Bad.

From Richmond to Darlington, by Croft Bridge. To Croft Bridge cross, and very indifferent. From thence to *Darlington* is the great north road, and execrably broke into holes, like an old pavement; sufficient to dislocate ones bones.

To Winston. Turnpike. Like the other.

To Raby Castle. Through Lord Darlington's grounds, made by his Lordship, and excellent.

To Dunham. Turnpike. Good. But some of it rough.

To Newcastle. Turnpike. Good; but part of it broken.

To the Iron works. Very bad.

To

To *Morpeth*. Ditto. A pavement for a mile or two out of *Newcastle*, which is tolerable; all the rest vile.

To *Alnwick*. Ditto. Much better than the last.

To *Belford*. Ditto. Better still.

To *Berwick*. Ditto. Part good, but some very bad.

To *Wooler*. Ditto. Part tolerable; but some execrable.

To *Rothbury*. Ditto. Part of it middling; some very good, but hilly.

Alnwick to *Rothbury*. Ditto. Middling; some good.

To *Wellington*. Ditto. Very good; towards *Wellington* excellent.

To *Ghaleford Bridge*. Ditto. Excellent.

Much indebted is the country to *Sir Walter Blacket* for the many good roads which lead every way around him.

To *Glenwald*. The military road. Excellent.

To the *River Arden*. Cross. Very bad.

To *Gerth*. Military. As far as *Brampston* good; but thence to *Carlisle* vilely cut up by innumerable little petty one horse carts.

To *Pensby*. Turnpike. Very good.

To *Keswick*. Ditto. Ditto; except a mile over a rotten common, which is as bad.

To *Hull's Water*. Cross. Middling; a coach may pass it very tolerably.

To *Shapp*. Turnpike. Very good.

To *Haw's Water*. Cross. Very bad.

To *Kendal*. Turnpike. Exceeding hilly, and some very steep, but the road itself excellent.

To *Winander Mere*. Turnpike; now making. What is finished, is as good, firm, level a road as any in the world. I no where remember a better.

To *Lancaster*. Turnpike. Very bad, rough, and cut up.

To *Preston*. Turnpike. Very bad.

To *Wigan*. Ditto. I know not, in the whole range of language, terms sufficiently expressive to describe this infernal road. To look over a map, and perceive that it is a principal one, not only to some towns, but even whole counties, one would naturally conclude it to be at least decent; but let me most seriously caution all travellers, who may accidentally purpose to travel this terrible country, to avoid it as they would the devil; for a thousand to one but they break their necks or their limbs by overthrows or breakings down. They will here

here meet with rutts which I actually measured four feet deep, and floating with mud only from a wet summer; what therefore must it be after a winter? The only mending it in places receives, is the tumbling in some loose stones, which serve no other purpose but jolting a carriage in the most intolerable manner. These are not merely opinions, but facts, for I actually passed three carts broken down in these eighteen miles of execrable memory.

To Warrington. Turnpike. This is a paved road, and most infamously bad. Any person would imagine the boobies of the country had made it with a view to immediate destruction; for the breadth is only sufficient for one carriage; consequently it is cut at once into rutts; and you will easily conceive what a break-down dislocating road rutts cut through a pavement must be. The pretence, of wanting materials, is but a mere pretence; for I remarked several quarries of rock, sufficient to make miles of excellent road. If they will pave, the breadth ought to be such as to ad-

mit several carriages abreast, or the inevitable consequence must be, the immediate cutting up. Tolls had better be doubled, and even quadrupled, than suffer such a nuisance to remain.

To Liverpool. Turnpike. This road is mostly a pavement; the first part of which is such as I have just described; tho' scarcely so bad. But towards *Liverpool* is of a good breadth, and as good as an indifferent pavement can be. It is observable this is a second work; the first narrow one being found as I have described it.

To Altringham. Turnpike. If possible this execrable road is worse than that from *Preston*. It is a heavy sand, which cuts into such prodigious rutts, that a carriage moves with great danger. These sands turn to floods of mud in any season the least wet.

To Manchester. Turnpike. Part of it the same as the last; the rest a paved causeway, and done in so execrable a manner, that it is cut into continual holes: For it is made so narrow, that only one carriage can move

at

at a time, and that consequently in a line of rutts.

From *Dunholm* to *Knotsford*. Turnpike. It is impossible to describe these infernal roads in terms adequate to their deserts: Part of these six miles I think are worse than any of the preceding.

To *Holmes Chapel*. Turnpike. Much better.

To *Newcastle*. Turnpike. This, in general, is a paved causeway, as narrow as can be conceived, and cut into perpetual holes, some of them two feet deep measured on the level; a more dreadful road cannot be imagined; and wherever the country is the least sandy, the pavement is discontinued, and the rutts and holes most execrable. I was forced to hire two men at one place to support my chaise from overthrowing, in turning out for a cart of goods overthrown and almost buried. Let me persuade all travellers to avoid this terrible country, which must either dislocate their bones with broken pavements, or bury them in muddy sand.

To *Burslem*. Turnpike. Deep muddy rutts in clay.

Here you must let me pause; for these execrable roads continuing no further, I must in general advise all who travel on any business but absolute necessity, to avoid any journey further north than *Newcastle*. All between that place and *Preston* is a country one would suppose devoid of all those improvements and embellishments, which the riches and spirit of modern times have occasioned in other parts: It is a track of country which lays a most heavy tax upon all travellers, and upon itself. Such roads are a much heavier tax than half a crown a horse for a toll would be. Agriculture, manufactures, and commerce must suffer in such a track, as well as the traveller. The rates of carriage and hire of carts must either run enormously high, or the farmers starve by letting their teams. But it is only bad management that can occasion such very miserable roads, in a country so abounding with towns, trade, and manufactures: The tolls of the turnpikes for several paved roads do not rise higher than 3*d.* per horse, for which sum they pave wide enough for one carriage. If this was quadrupled they might certainly do it well for three, and then it would escape being cut up: But if they were five times trebled, it would be infinitely preferable to the present condition: Until better management

nagement is produced, I would advise all travellers to consider this country as sea, and as soon think of driving into the ocean as venturing into such detestable roads. I am told the *Derby* way to *Manchester* is good. But further is not penetrable.

To *Stone*. Turnpike. Most of it good; some very good.

To *Lichfield*. Turnpike. Pretty good, but some of it sandy and cut up.

To *Birmingham*. Cross. Better; but the last mile and half into *Birmingham*, excessively cut up.

To *the Leasowes*. Turnpike. Very good.

To *Hagley*. Ditto. Ditto.

To *Broomsgrave*. Turnpike. Good.

To *Worcester*. Turnpike. Excellent.

To *Bendishworth*. Turnpike. Ditto.

To *Chipping Norton*. Turnpike. To *Moreton* bad, but to *Chipping Norton* from thence good.

To *Woodstock*. Ditto. Good.

To *Oxford*. Ditto. Middling. Many narrow ways, where a horse cannot pass a carriage; and in general, in this country, the not breaking the stones small enough is a great nuisance.

To *Bensington*. Turnpike. Good.

To *Henley*. Turnpike. Excellent.

To

To *Maidenhead*. Turnpike. Admirable;
but in all these roads there are too
many narrow ways left, that ren-
der it difficult for carriages to pass
each other.

To *Salt Hill*. Turnpike. Excellent.

To *Brentford*. Ditto. Ditto.

To *London*. Ditto. Ditto. But much
too narrow for such vast traffic.

To *Bradmore Farm*. Ditto. Excellent
and of a noble breadth.

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I N N S.

I THINK there are many objections to
suffering the characters of inns, and the
minutiae of a journey, to intermix with the
material objects of a tour. But I cannot
agree with those who think all matters of
this sort beneath a man's notice; the most
trifling circumstances are of some weight in
deciding the character and state of a nation;
the grand chain of prosperity has links we
do not think of: Good roads, and conve-
nient accommodations for travellers, are ne-
cessary, not only to agriculture and manu-
factures, but to the fine arts; even to lite-
rature, and every embellishment of life;
the

the possession of them implies a state of prosperity and elegance. It is of consequence to know, that in the remotest parts of the kingdom a traveller will meet a reception, in most respects different from what he will find in foreign countries; a decent bed; clean sheets; plenty of fowl; wholesome provisions; and generally a civil landlord. As to the prices at some of the following places, I add them as a matter of curiosity; to shew, that the north yet continues, beyond all comparison, cheaper than the south, in most of the points in which an inn can indicate it.

Stevenage. Swan. *Whittington.* Very good and very civil.

Luton. George. *Erobank.* Civil.

Dunstable. Bull. *Serjant.* Very good.

Mutton steakes, 1s. duck, 2s.
bread, 2d. a head.

Wooburn. George. *Hassal.* Ditto.

Newport Pagnel. Swan. Middling.

Bedford. Swan. Good.

St. Neot's. Cross Keys. Exceeding civil.

Kimbalton. White Lion. Shabby.

Thrapston. White Hart. Jones. Good.

Oundle. Talbot. Indifferent.

Stamford. George. Scurry. Exceeding good and reasonable; but wretched waiting.

Colts-

Coltsworth. *Tinkler.* Very good.
Grantbam. *George.* *Crabtree.* Very good, uncommonly civil, and very reasonable.

Newark. *Saracen's head.* Disagreeable and dear.

Bawtry. *Crown.* Middling, but cheap. Here we first found dinners charged 1s. a head, and nothing for bread and beer.

Doncaster. *Angel.* *Dunhill.* Middling.
Rotherham. *Crown.* Very disagreeable and dirty; but very cheap. Hashed venison, potted mackarel, cold ham, tarts, cheese, and a melon, at 1s. a head.

Sheffield. *Angel.* *Glanville.* Very good, exceedingly civil, and cheap.

Wakefield. *White Hart.* *Walker.* Disagreeable and dirty; but cheap.

Leeds. *Old King's arms.* *Cook.* Dirty and disagreeable. Veal cutlets, tarts, and cheese for supper, at 8d. a head, without malt liquor being charged.

York. *George.* *Baldock.* Middling.

Barnby Moor. *Smeathman.* Very civil, and very cheap.

Beverley. *Tiger.* *Todd.* Very civil, and reasonable.

Hull. *Cross Keys.* Good, and civil.
Beverley.

Beverley. Boar. Very civil, and cheap.

Thorn. White Hart. *Wilkin.* Civil,
and cheap.

Doncaster. Red Lion. *Jacques.* Very
good, civil, and reasonable.

Workshop. Little John. Civil, and cheap.

Pontefract. Red Lion. *Woodcock.* Civil,
and cheap.

Ferrybridge. White Swan. *Loive.* Very
good, and reasonable.

Driffild. Nag's head. *Harland.* Very
civil and cheap. Mutton steaks,
ducks, tarts, and cheese; mush-
rooms, capers, wallnuts, gurkins,
and other pickles, 2s.

Burlington Quay. Ship. *Williamson.*
Cheap, but not clean.

Scarborough. New Inn. *Stephens.* Very
cheap, but very dirty. Cold ham,
chicken, lobster, tarts, anchovies,
and cheese, 1s. 4d. Coffee or tea,
6d. a head.

Feddingham Bridge. *Prudames.* Very
civil, and not unreasonable.

Castle Howard. New Inn. *Crowe.* An
excellent house, but dear, and a
faucy landlady.

Stokesley in Cleveland. George. Civil,
but shabby.

Gisborough. Cock. Very well.

Darlington.

Darlington. King's head. Good and reasonable.

Schorton. Bull. *Dolly Bentley.*

Richmond. King's head. Good. Brace of partridges, leath of trout, and cheese, 1 s. a head.

Greta Bridge. George. Middling.

Bowes. George. Civil, but not cheap.

Brough. Swan. *Peacock.* Pretty good.

Durham. Red Lion. *Richardson.*

Newcastle Wind. Civil, but extravagantly dear. A boiled fowl, oysters, and one woodcock, 2 s. 6 d. a head. Also, a roast fowl, a very small haddock, and ten smelts, 2 s. 6 d. a head.

Alnwick. Angel. *Trumbull's.* Pretty good.

Belford. Bugg's. Very good.

Rothbury. Three half moons. *Ogle.* Clean, and very civil.

Cambo. White Hart. *Aynsley.* Where you will find a haughty landlady, who lays it down as a maxim of conduct, never to come near her company, send as often as you please.

Choloford Bridge. George. Very civil, and to a degree cheap. Mutton chops, pickles, potatoes, tarts, and cheese, 6 d. a head.

Glenwelt. Angel. *Armstrong's.* Very civil, but not clean, extremely cheap.

cheap. Boiled fowl with catchup
sauce, and roast potatoes 8d. a head.

Carlisle. *Bush.* *J. Garthwaite.* Good.
A broiled chicken, with mushroom
sauce, a plover, plate of sturgeon,
tarts, mince-pies, and jellies,
1s. 6d. a head.

Penrith. *New George.* *Monkhouse.*
Exceeding good, reasonable, and
very civil. The dinner was roast
beef, apple pudding, potatoes, cel-
lery, potted trout, and sturgeon,
1s. a head.

Keswick. *Royal oak.* *Matthew Brock-
bank.* Very civil and cheap, but
indifferent accommodation.

Shapp. *Greyhound.* *Thomas Holme.*
Cheap and civil, but a very indif-
ferent house.

Kendal. *King's arms.* *Christopher Fen-
ton.* A good house, very civil, and
remarkably cheap. A brace of
woodcocks, veal cutlets, and cheese,
1s. a head, dinner. A boiled fowl
and sauce, a roast partridge, potted
charr, cold ham, tarts, and three
or four sorts of foreign sweetmeats,
8d. a head; three people supped.
Another supper; cold ham, tarts,
potted charr, anchovies, butter and
cheese, 6d. a head. Tea or coffee
6d.

6d. a head. Other things proportionably cheap.

Burton. Royal oak. *Thomas Newton.*
a decent reasonable house.

Lancaster. King's arms. *Joseph Reynolds.* Pretty good, but rather dear.

Garstang. Royal oak. Middling.

Preston. Black Bull. Indifferent and dear; bad bed chambers, and beds.

Wigan. Eagle and child. Indifferent.

Warrington. Eagle and child. Very good.

Prescot. Legs of Man. Very civil and reasonable.

Liverpool. Talbot. Cheap; a very bad house.

Altringham. Unicorn. good.

Manchester. Bull's head. *Budworth.*

Mr. Budworth is a most sensible intelligent person, and gives travellers the best information relative to the Duke of *Bridgewater's* navigation.

Worsley Mills. White Lion. *Dykes.* Good.

Dunholme. Very clean and cheap.

Knutsford. George. *Hancock.* But indifferent.

Holmes Chapel. Red Lion. *Wernon.* Good.

Newcastle-under-Line. Old Roe-buck.

Mason. Middling; but a bad house.

Stone. Crown. *Morgan.* Very civil and reasonable.

Worsley Bridge. Saracen's head. Ditto.

Lichfield.

Lichfield. George. *Butler.*

Birmingham. Swan. *Barber.* Good,
but rather dear.

Hales Owen. Lord Littleton's arms. De-
cent to bait at.

Hagley. Lord Littleton's arms. Civil,
reasonable, clean, and an excellent
bed.

Broomsgrove. Swan. Good.

Worcester. Hop-pole. Good; very civil.

Bendishorth. Unicorn. *William Penny.*

Very good and civil; the landlord
in the path of husbandry, exceedingly
sensible, practical, and intelligent.

Moreton. White hart. Middling.

Chipping-Norton. White hart. Good,

but dear; bread charged.

Infstone near Ditchley. Lichfield arms.

Good.

Woodstock. Bear. Cross. Good.

Oxford. Angel. Very dirty, and not

obliging.

Bensington. White hart. *Sbrubb.* Good,

but very dear. Coffee 9d. a head.

Henley. Red lion. *March.* Very good.

Maidenhead bridge. *March.* Good. Very

dear. For supper, a stewed carp of

about a pound and half, 4s. a duck,

2s. 6d. a minc'd pie, 9d.

Salt-hill. Castle. Good. Tea 9d. a head.

S E A T S.

THE following Table of Rooms in several houses, I should remark, presents a pretty tolerable idea of those parts that are usually shewn to strangers; but it by no means gives the exact proportions of the whole house in any instance; and in some I might not be shewn the whole of the grand apartments. The rooms minuted are those I viewed. *Wentworth-house*, which is the largest in the tour, and I believe in the kingdom, has only the grand floor minuted. *Wooburn*, I think, contains all I was shewn on the two floors. *Kiveton* contains two floors. *Alnwick*, *Raby*, and *Ditchley*, but one: I believe, (but I write from memory,) that all the rest contains the rooms on two floors shewn. *Raby-Castle*, which here appears very small in general, is a vast building, and contains a great number of excellent rooms; but as they are judiciously thrown into those of utility alone, the size of the building does not appear from this table. I must beg an excuse for errors in this review; it is not a matter of consequence, but amusement; and where I am wrong, I should be very glad to be set right.

P O S T.

P O S T S C R I P T.

HAVING, in these sheets, endeavoured to prove the great importance of the culture of cabbages, and earnestly recommended it to all farmers, I think it incumbent on me to add, that those who may have any inclination to try their utility, but should chuse first to see as well as read the nature of the management, if they will do me the pleasure of calling at *North Mims*, they may view more than seven acres now occupied with that excellent vegetable, and also the preparation of above twenty acres for next year. This culture being chiefly confined to the northern parts of the kingdom, induces me to hint this circumstance.

*Bradmore Farm,
North Mims, Herts,
September 1, 1769.*

IF this Work meets with so favourable a reception, as to induce the lovers of agriculture, in the remaining parts of the kingdom, to desire a prosecution of the undertaking, the following counties are those which demand the first attention, in the order in which they follow, in case proposed intelligence does not require deviations; viz. *Buckinghamshire; Northamptonshire; Warwickshire; Leicester and Rutlandshires; Derbyshire; Nottinghamshire; Lincolnshire; Huntingdonshire; Cambridgeshire; the maritime parts of Norfolk, Suffolk, and Essex; Kent; Sussex; Surry; Berkshire; Dorsetshire; Somersetshire; Devonshire; Cornwall; Herefordshire; Gloucestershire; and Shropshire.* The author intends prosecuting the Tour early next summer: he wishes, therefore, that any intelligence he is honoured with, may be early enough to enable him to mark his route to the best advantage.

